Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Amherst

STREAM NAME: Pedlar Lake

HYDROLOGIC UNIT: 02080203

TMDL ID: VAC-H02L-01

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 116.98 - Acres

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Backwaters

RIVER MILE:

LATITUDE: 37.68950 **LONGITUDE:** -79.27940

DOWNSTREAM LIMIT:

DESCRIPTION: Impoundment Structure

RIVER MILE:

LATITUDE: 37.66930 **LONGITUDE:** -79.27730

Pedlar Reservoir from its impounding structure to its backwaters.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH, Dissolved Oxygen

Pedlar Lake was assessed not supporting of the Aquatic Life Use based on low dissolved oxygen below the thermocline at 2-POL017.59. Pedlar Lake is stratified June-October. Trophic State Indices were calculated for the following parameters: Chlorophyll a - 54.14, Total Phosphorous - 40 and Secchi Depth - 48.30.

Pedlar Lake is considered mesotrophic and non-impaired based on these calculations.

Pedlar Lake is not supporting the Aquatic Life Use based on pH violations recorded in 13/45 measurements below the thermocline.

IMPAIRMENT SOURCE: Unknown, Hypolimnetic Waters

The low DO is caused by stratification of the lake.

The source of the pH violations are considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Amherst, Lynchburg

STREAM NAME: Blackwater Creek

HYDROLOGIC UNIT: 02080203

TMDL ID: VAC-H03R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 10.24 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Confluence of Tomahawk and Burton Creeks

RIVER MILE: 10.24

LATITUDE: 37.38639 **LONGITUDE:** -79.21000

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth of Blackwater Creek on the James River

RIVER MILE: 0.00

LATITUDE: 37.41944 **LONGITUDE:** -79.14611

Blackwater Creek from the confluence of Tomahawk and Burton Creeks to the mouth of Blackwater Creek on the James River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Blackwater Creek is not supporting the recreation use due to excessive counts of fecal coliform in 10/16 samples taken at 2BKW000.40.

IMPAIRMENT SOURCE: NPS - Urban/CSO

The source of the fecal coliform is urban nonpoint source pollution and combined sewer overflows.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Amherst, Lynchburg

STREAM NAME: Fishing Creek

HYDROLOGIC UNIT: 02080203

TMDL ID: VAC-H03R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.45 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: East of the Rt. 460 and Rt. 29 Junction

RIVER MILE: 5.45

LATITUDE: 37.37528 **LONGITUDE:** -79.16333

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with James River

RIVER MILE: 0.00

LATITUDE: 37.39944 **LONGITUDE:** -79.12361

Fishing Creek mainstem from its confluence with the James River upstream to east of the Rt. 460 and Rt. 29 junction.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Fishing Creek is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 8/25 samples taken at 2-FSG000.85.

IMPAIRMENT SOURCE: NPS - Urban/CSO

The source of the fecal coliform is urban nonpoint source pollution and combined sewer overflows.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Lynchburg

STREAM NAME: Ivy Creek

HYDROLOGIC UNIT: 02080203

TMDL ID: VAC-H03R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.37 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Mouth of Cheese Creek

RIVER MILE: 5.37

LATITUDE: 37.42167 **LONGITUDE:** -79.22333

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Blackwater Creek

RIVER MILE: 0.00

LATITUDE: 37.41833 **LONGITUDE:** -79.18556

Ivy Creek mainstem from the mouth of Cheese Creek downstream to Ivy Creek's confluence with Blackwater Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Ivy Creek is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 3/19 samples taken at 2-IVA000.22.

IMPAIRMENT SOURCE: NPS - Urban/CSO

The source of the fecal coliform is urban nonpoint source pollution and combined sewer overflows.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Amherst, Lynchburg

STREAM NAME: James River

HYDROLOGIC UNIT: 02080203

TMDL ID: VAC-H03R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 10.15 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Reusens dam

RIVER MILE: 262.77

LATITUDE: 37.46306 **LONGITUDE:** -79.18590

DOWNSTREAM LIMIT:

DESCRIPTION: Archer Creek confluence with the James R.

RIVER MILE: 252.62

LATITUDE: 37.42417 **LONGITUDE:** -79.14155

James River mainstem from Reusens dam downstream to the Archer Creek confluence with the James River. The segment spans the Lynchburg and Kelly Quads.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform, PCBs in Fish Tissue (2004)

This segment of James River is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceed the instantaneous 400 n/100 ml criterion in 15/49 samples at 2-JMS258.54. The segment is not supporting the fish consumption use due to elevated levels of PCBs found in 4 species at station 2-JMS258.54, during a 2001 sampling event. The segment begins in watershed VAC-H03R and ends in the upper portion of VAC-H05R.

A Consent Order requires the City of Lynchburg to embark on a long term project to correct sewage overflows (CSOs) by removing roof drains from homes and most importantly upgrading interceptor lines within the City. The total project cost was estimated to be 218 million dollars in 1989 dollars. A rough estimate for total project cost in today's dollars is 290 million dollars.

Since July 1, 1993 Lynchburg City has expended, authorized and appropriated 126.4 million dollars. A total of approximately 89.4 million dollars has been authorized for CSOs and 76.3 million dollars expended as reported in the DEQ Compliance Report for FY02. The City continues to work with the Virginia Revolving Loan Fund to obtain low interest and no interest loans for CSO and water quality projects. The total amount to be appropriated for FY 03 CSO projects is 10.9 million dollars and $735,000 in water quality projects.

As of October 2002, 4,787 structures have had rainleaders disconnected representing approximately 69% of the total 6,934 structures. Citizens voluntarily disconnecting rainleaders saved the City an approximate 1 million dollars. The total disconnected impervious area represented by these disconnections exceeds 8,244,430 suare feet. Completed interceptor projects include Blackwater, Fishing and Ivy Creeks. 89 of the original 132 overflow points have been eliminated. The updated Lynchburg City sewer model shows a 77% reduction in combined sewer overflow volume since 1989 due to completed CSO projects. In addition to remaining rainleader disconnects and overflow points other projects include the replacement of the James River interceptor and infrastucture upgrades within the collection and waste treatment system.

The segment was shortened during the 2002 cycle from the 1998 303(d) Listing. Two upstream stations 2-JMS282.28 and 2-JMS275.75

find no exceedances of the fecal coliform bacteria instantaneous criterion each with 58 sample collections. Thus the segment is shortened to reflect these upstream conditions. The downstream end of the 1998 segment is shortened also as no data are available to substantiate extension beyond Archer Creek.

IMPAIRMENT SOURCE: NPS - Urban/CSO, Unknown

The source of the fecal coliform is urban nonpoint source pollution and combined sewer overflows. The source of PCBs is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Amherst

STREAM NAME: Graham Creek

HYDROLOGIC UNIT: 02080203

TMDL ID: VAC-H04R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.2 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 5.20

LATITUDE: 37.49000 **LONGITUDE:** -79.16611

DOWNSTREAM LIMIT:

DESCRIPTION: Graham Creek Reservoir backwaters

RIVER MILE: 0.00

LATITUDE: 37.55556 **LONGITUDE:** -79.20389

Graham Creek mainstem from the Graham Creek Reservoir backwaters upstream to its headwaters.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Graham Creek is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 3/6 samples taken at 2-GRA0002.89.

IMPAIRMENT SOURCE: NPS - Urban

The source of the fecal coliform is urban nonpoint source pollution.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Amherst, Appomattox, Nelson

STREAM NAME: James River

HYDROLOGIC UNIT: 02080203

TMDL ID: VAC-H05R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.15 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Wreck Island Creek confluence

RIVER MILE: 235.08

LATITUDE: 37.51222 **LONGITUDE:** -78.89944

DOWNSTREAM LIMIT:

DESCRIPTION: Bent Creek

RIVER MILE: 228.93

LATITUDE: 37.53611 **LONGITUDE:** -78.83000

James River mainstem from the Wreck Island Creek confluence downstream to the watershed boundary at the mouth of Bent Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of James River is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 8/40 samples taken at 2-JMS229.14.

IMPAIRMENT SOURCE: Unknown

The sources of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Campbell, Amherst

STREAM NAME: Beaver Creek

HYDROLOGIC UNIT: 02080203

TMDL ID: VAC-H05R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 8.5 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Route 501 Bridge

RIVER MILE: 8.5

LATITUDE: 37.32120 **LONGITUDE:** -79.10430

DOWNSTREAM LIMIT:

DESCRIPTION: James River

RIVER MILE: 0.00

LATITUDE: 37.39070 **LONGITUDE:** -79.06000

Beaver Creek mainstem from its mouth on the James River upstream to an unnamed tributaries mouth at the Rt. 501 Bridge.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Beaver Creek is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 4/24 samples taken at
2-BCR000.20.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Campbell

STREAM NAME: Opposum Creek

HYDROLOGIC UNIT: 02080203

TMDL ID: VAC-H05R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.86 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Route 660 Bridge

RIVER MILE: 2.86

LATITUDE: 37.35910 **LONGITUDE:** -79.09040

DOWNSTREAM LIMIT:

DESCRIPTION: James River

RIVER MILE: 0.00

LATITUDE: 37.38710 **LONGITUDE:** -79.06510

Opossum Creek mainstem from its mouth on the James River upstream to the Rt. 660 crossing

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Opposum Creek is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 2/10 samples taken at
2-OPP000.16.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Amherst, Appomattox

STREAM NAME: Wreck Island Creek

HYDROLOGIC UNIT: 02080203

TMDL ID: VAC-H06R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 9.75 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Confluence of Little Wreck Island Creek

RIVER MILE: 10.15

LATITUDE: 37.41722 **LONGITUDE:** -78.89889

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth on the James River

RIVER MILE: 0.40

LATITUDE: 37.50722 **LONGITUDE:** -78.89833

Wreck Island Creek mainstem from its mouth on the James River upstream to the confluence of Little Wreck Island Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Wreck Island Creek is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 4/17 samples taken at 2-WIC000.40.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Appomattox, Nelson

STREAM NAME: Bent Creek

HYDROLOGIC UNIT: 02080203

TMDL ID: VAC-H07R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 13.5 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 13.5

LATITUDE: 37.40710 **LONGITUDE:** -78.80770

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.53510 **LONGITUDE:** -78.82860

Bent Creek mainstem from its mouth on the James River upstream to its headwaters.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Bent Creek is not supporting the recreation use due to excessive counts of fecal coliform bacteria found in 3/17 samples taken at station 2-BTC000.16.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Appomattox, Nelson, Buckingham

STREAM NAME: James River

HYDROLOGIC UNIT: 02080203

TMDL ID: VAC-H08R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 10.08 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Bent Creek Confluence

RIVER MILE: 228.93

LATITUDE: 37.53510 **LONGITUDE:** -78.82860

DOWNSTREAM LIMIT:

DESCRIPTION: Tye River Confluence

RIVER MILE: 218.85

LATITUDE: 37.63990 **LONGITUDE:** -78.80670

James River from Bent Creek to its confluence with the Tye River

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of James River is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 8/40 samples taken at 2-JMS229.14.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Amherst

STREAM NAME: Buffalo River

HYDROLOGIC UNIT: 02080203

TMDL ID: VAC-H11R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.87 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Franklin Creek

RIVER MILE: 15.39

LATITUDE: 37.65990 **LONGITUDE:** -79.14450

DOWNSTREAM LIMIT:

DESCRIPTION: An unimproved road crossing just downstream of the Mill Creek confluence

RIVER MILE: 9.52

LATITUDE: 37.64940 **LONGITUDE:** -79.07400

Buffalo River mainstem from an unimproved road crossing just downstream of the Mill Creek confluence (upstream end of the WQS public water supply (PWS) designation) upstream to the mouth of Franklin Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Buffalo River is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 2/5 samples taken at
2-BUF023.21.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Amherst

STREAM NAME: Rutledge Creek

HYDROLOGIC UNIT: 02080203

TMDL ID: VAC-H12R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.16 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Amherst STP outfall

RIVER MILE: 3.16

LATITUDE: 37.58361 **LONGITUDE:** -79.03056

DOWNSTREAM LIMIT:

DESCRIPTION: mouth on Buffalo River

RIVER MILE: 0.00

LATITUDE: 37.58889 **LONGITUDE:** -79.00194

Rutledge Creek mainstem from the Town of Amherst outfall downstream to its mouth on the Buffalo River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Rutledge Creek is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in7/22 samples taken at 2-RTD003.08. The segment is fully supporting but there is an observed effect for the aquatic life use due to exceedances of the nutrient screening value. Total phosphorus exceeded the screening value in 9/20 samples taken at 2-RTD003.08.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Amherst, Nelson

STREAM NAME: Buffalo River

HYDROLOGIC UNIT: 02080203

TMDL ID: VAC-H12R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 7.61 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Rocky Creek

RIVER MILE: 7.61

LATITUDE: 37.60972 **LONGITUDE:** -78.92389

DOWNSTREAM LIMIT:

DESCRIPTION: Tye River

RIVER MILE: 0.00

LATITUDE: 37.62250 **LONGITUDE:** -78.89694

The segment begins at the Rocky Creek confluence and extends downstream to the Buffalo River mouth on the Tye River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic) (2.45 miles), Fecal Coliform (2004) (7.61 miles)

This segment of the Buffalo River is not supporting the recreation use goal due to high counts of fecal coliform bacteria. Counts were observed at 2-BUF002.10 at a violation rate of 7 out of 49 samples.

DEQ's biological monitoring station at river mile 2.10 indicated slight impairment during a Spring 2002 sampling event. The 1998 305b report assessed the 2.45 mile segment (from the low water dam at the Route 629 bridge to the Tye River confluence) of the stream as not supporting the Clean Water Act's Aquatic Life Use Support Goal. The slightly impaired rating recorded in one survey does not constitute a delisting. Therefore the 2.45 mile segment will remain on the 303d list.

IMPAIRMENT SOURCE: Unknown, Unknown

The source of the fecal coliform and benthic impairment is unknown. There is dam upstream that could cause fluctuations in water levels.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Buckingham, Fluvanna

STREAM NAME: Bear Garden Creek

HYDROLOGIC UNIT: 02080203

TMDL ID: VAC-H20R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 9.4 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 9.40

LATITUDE: 37.62361 **LONGITUDE:** -78.36111

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth at James River

RIVER MILE: 0.00

LATITUDE: 37.70806 **LONGITUDE:** -78.29000

Bear Garden Creek from the headwaters to the mouth at the James River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Bear Garden Creek is not supporting the recreation use due to excessive fecal coliform bacteria counts in 5/27 samples taken at 2-BGC000.58.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Fluvanna

STREAM NAME: North Creek

HYDROLOGIC UNIT: 02080203

TMDL ID: VAC-H20R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.24 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Begins at the FUMA STP

RIVER MILE: 3.51

LATITUDE: 37.75750 **LONGITUDE:** -78.25028

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the confluence with an X-Trib

RIVER MILE: 2.27

LATITUDE: 37.76361 **LONGITUDE:** -78.22889

Segment begins at the FUMA discharge and continues downstream to the confluence with an X-Trib.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

This segment of North Creek is not supporting of the Aquatic Life use support goal. A benthic assessment rated the benthic macroinvertebrate community as moderately impaired for the 2004 305(b) cycle, based on surveys taken at 2-NOR003.28.

IMPAIRMENT SOURCE: Minor Municipal Point Source

The source is believed to be the FUMA discharge.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Buckingham

STREAM NAME: Austin Creek

HYDROLOGIC UNIT: 02080203

TMDL ID: VAC-H21R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.14 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 6.14

LATITUDE: 37.51583 **LONGITUDE:** -78.72333

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth at North River

RIVER MILE: 0.00

LATITUDE: 37.55556 **LONGITUDE:** -78.65056

Austin Creek from its headwaters to the mouth at North River

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: pH (2002), Fecal Coliform (2004)

Austin Creek is not supporting the aquatic life use support goal due to pH violations in 3/9 monitoring events at 2-AUS001.12, a confined animal feeding operation (CAFO) special study station. Austin Creek is also not supporting the recreation use due to fecal coliform violations in 3/9 monitoring events at the same station.

IMPAIRMENT SOURCE: Unknown, Unknown

The source of the pH and fecal coliform violations is unknown. There is not enough data to determine if the CAFO facility is the source of impairment in this segment.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Buckingham

STREAM NAME: Frisby Branch

HYDROLOGIC UNIT: 02080203

TMDL ID: VAC-H21R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.74 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 3.74

LATITUDE: 37.52472 **LONGITUDE:** -78.67472

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth at Slate River

RIVER MILE: 0.00

LATITUDE: 37.52889 **LONGITUDE:** -78.65194

Frisby Branch from its headwaters to the mouth at Slate River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2002) (3.74 miles), pH (2004) (1.34 miles)

Frisby Branch is not supporting the recreation use due to excessive counts of fecal coliform bacteria. High counts were found in 4/9 samples taken at 2-FRY003.00 and 2/8 samples taken at 2-FRY000.35, confined animal feeding operation (CAFO) special study stations.

The upper portion of Frisby Branch (1.34 miles) is not supporting the aquatic life use due to pH violations found in 2/9 samples at 2-FRY003.00.

IMPAIRMENT SOURCE: Unknown, Unknown

The source of fecal coliform and pH violations are unknown. There is not enough data to determine if the CAFO facility is the source of impairment in this segment.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Buckingham

STREAM NAME: North River

HYDROLOGIC UNIT: 02080203

TMDL ID: VAC-H21R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 8.44 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Confluence with Meadow Creek

RIVER MILE: 8.44

LATITUDE: 37.55833 **LONGITUDE:** -78.64222

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth at Slate River

RIVER MILE: 0.00

LATITUDE: 37.57056 **LONGITUDE:** -78.54833

The North River from the confluence with Meadow Creek to the mouth at the Slate River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of North River is not supporting the recreation use due to excessive counts of fecal coliform bacteria. High counts were found in 5/36 samples taken at 2-NTH001.65 and 7/9 samples taken at 2-NTH003.88.

IMPAIRMENT SOURCE: Unknown

The sources of fecal coliform violations is unknown. There is not enough data to determine if the CAFO facility is the source of impairment in this segment.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Buckingham

STREAM NAME: Slate River

HYDROLOGIC UNIT: 02080203

TMDL ID: VAC-H21R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 13.28 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Confluence with Fricby Branch

RIVER MILE: 24.65

LATITUDE: 37.54972 **LONGITUDE:** -78.57222

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Walton Fork

RIVER MILE: 11.37

LATITUDE: 37.51694 **LONGITUDE:** -78.52306

The Slate River from the confluence with Frisby Branch downstream to the confluence with Walton Fork.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Slate River is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 3/9 samples taken at 2-SLT024.72 and in 5/9 samples taken at 2-SLT030.19, confined animal feeding operation (CAFO) special study stations.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown. There is not enough data to determine if the CAFO facility is the source of impairment in this segment.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Buckingham

STREAM NAME: Troublesome Creek

HYDROLOGIC UNIT: 02080203

TMDL ID: VAC-H21R-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.95 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Troublesome Creek Reservoir dam

RIVER MILE: 0.95

LATITUDE: 37.56870 **LONGITUDE:** -78.53150

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth at Slate River

RIVER MILE: 0.00

LATITUDE: 37.58040 **LONGITUDE:** -78.53110

Troublesome Creek from the Troublesome Creek Reservoir dam to the mouth at the Slate River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Troublesome Creek is not supporting the recreation use goal due to excessive counts of fecal coliform bacteria. Violations of the instantaneous standard were recorded in 2/9 samples taken at 2-TBM000.80.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Buckingham

STREAM NAME: Slate River

HYDROLOGIC UNIT: 02080203

TMDL ID: VAC-H22R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 7.65 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Confluence with Sharps Creek

RIVER MILE: 7.12

LATITUDE: 37.69417 **LONGITUDE:** -78.41889

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth at James River

RIVER MILE: 0.00

LATITUDE: 37.71444 **LONGITUDE:** -78.32417

The Slate River from the confluence with Sharps Creek to the James River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Slate River is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 4/27 samples taken at 2-SLT003.88.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Buckingham

STREAM NAME: Willis River, UT (XQM)

HYDROLOGIC UNIT: 02080205

TMDL ID: VAC-H35R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.72 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2002

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 1.72

LATITUDE: 37.45722 **LONGITUDE:** -78.57250

DOWNSTREAM LIMIT:

DESCRIPTION: Willis River

RIVER MILE: 0.00

LATITUDE: 37.43611 **LONGITUDE:** -78.56611

Unnamed tributary to the Willis River

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen (2002), Fecal Coliform

The unnamed tributary to Willis River is not supporting the aquatic life use due to violations of the dissolved oxygen (DO) standard. Low DO levels were recorded in 2/9 monitoring events at 2-XQM000.03, a confined animal feeding operation (CAFO) special study station.

The unnamed tributary to Willis River is not supporting the recreation use due to violations of the fecal coliform standard. High counts of fecal coliform bacteria were recorded in 3/9 monitoring events at 2-XQM000.03, a confined animal feeding operation (CAFO) special study station.

IMPAIRMENT SOURCE: Unknown, Non-Point Source

The source of the fecal coliform and DO standard violations are unknown. There is not enough data to determine if the CAFO facility is the source of impairment in this segment.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Prince Edward, Cumberland, Amelia, Chesterfield, Buckingham, Appomattox, Powhatan

STREAM NAME: Appomattox River

HYDROLOGIC UNIT: 02080207

TMDL ID: VAC-J01R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 97.2 - Miles

INITIAL LISTING: 1994 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Suanee Creek

RIVER MILE: 143.57

LATITUDE: 37.33880 **LONGITUDE:** -78.65920

DOWNSTREAM LIMIT:

DESCRIPTION: Sappony Creek

RIVER MILE: 46.37

LATITUDE: 37.33400 **LONGITUDE:** -77.79670

Segment begins at the confluence of the Appomattox River with Suanee Creek in Appomattox County, and extends downstream to the confluence of the Appomattox River with Sappony Creek in Chesterfield County.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Appomattox River is not supporting the recreation use due to excessive counts of fecal coliform bacteria. The violation rates were as follows:
3/12 at the Route 618 bridge (2-APP143.57)
9/44 at the Route 15 bridge (2-APP118.04)
12/47 at the Route 620 bridge (2-APP090.12)
18/53 at the Route 360 bridge (2-APP050.23).

The orginal segment listed in 1994 has been modifed in the 2004 cycle to reflect monitoring results upstream and downstream. The original segment was 80.6 miles long, stretching from Vaughn's Creek downstream to the Deep Creek confluence. The new segment has been extended to the confluence with Suanee Creek due to excessive counts found at 2-APP143.57 and shortened due to an acceptable violation rate of 1/11 samples found at the Route 602 bridge (2-APP044.78).

IMPAIRMENT SOURCE: Agriculture

The source is believed to be agricultural nonpoint source (NPS) runoff in the watershed, however this is unverified.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY:

STREAM NAME: Spring Creek

HYDROLOGIC UNIT: 02080207

TMDL ID: VAC-J02R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.5 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Confluence with Mud Creek

RIVER MILE: 5.50

LATITUDE: 37.22000 **LONGITUDE:** -78.57583

DOWNSTREAM LIMIT:

DESCRIPTION: Buffalo Creek

RIVER MILE: 0.00

LATITUDE: 37.24250 **LONGITUDE:** -78.49861

Spring Creek from the confluence with Mud Creek to Buffalo Creek

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Spring Creek is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 3/20 samples taken at 2-SPA001.46.

IMPAIRMENT SOURCE: Non-Point Source

The violations of the fecal coliform standard is believed to be caused by non-point sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Prince Edward

STREAM NAME: Little Sandy Creek

HYDROLOGIC UNIT: 02080207

TMDL ID: VAC-J03R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 7.35 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 7.35

LATITUDE: 37.14944 **LONGITUDE:** -78.29028

DOWNSTREAM LIMIT:

DESCRIPTION: Sandy River Reservoir

RIVER MILE: 0.00

LATITUDE: 37.23806 **LONGITUDE:** -78.31667

Little Sandy Creek from headwaters to Sandy Reservoir

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Little Sandy Creek is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 6/11 samples taken at 2-LIT002.40.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Prince Edward

STREAM NAME: Marrowbone Creek

HYDROLOGIC UNIT: 02080207

TMDL ID: VAC-J03R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.98 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 4.98

LATITUDE: 37.23611 **LONGITUDE:** -78.24583

DOWNSTREAM LIMIT:

DESCRIPTION: Sandy River

RIVER MILE: 0.00

LATITUDE: 37.25861 **LONGITUDE:** -78.31722

Marrowbone Creek from headwaters to Sandy River

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

Marrowbone Creek is not supporting the aquatic life use due to violations of the dissolved oxygen (DO) standard. Marrowbone Creek was reassessed during the 2004 Appomattox TMDL study and was found as impaired, based on TSI calculations.

IMPAIRMENT SOURCE: Unknown

The source of the DO standard violations is due to one or more pollutants from anthropognic sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Prince Edward

STREAM NAME: Sandy River

HYDROLOGIC UNIT: 02080207

TMDL ID: VAC-J03R-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.31 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Marrowbone Creek Confluence

RIVER MILE: 4.31

LATITUDE: 37.25890 **LONGITUDE:** -78.31750

DOWNSTREAM LIMIT:

DESCRIPTION: Bush River Confluence

RIVER MILE: 0.00

LATITUDE: 37.29960 **LONGITUDE:** -78.32530

Sandy River from Marrowbone Creek to its confluence with Bush River

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Sandy River is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 3/17 samples taken at the Route 460 bridge (2-SDY003.00).

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Prince Edward, Cumberland

STREAM NAME: Bush River

HYDROLOGIC UNIT: 02080207

TMDL ID: VAC-J04R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Confluence with Millers Creek

RIVER MILE: 5.00

LATITUDE: 37.26111 **LONGITUDE:** -78.35972

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Appomattox River

RIVER MILE: 0.00

LATITUDE: 37.30000 **LONGITUDE:** -78.32556

Bush River from the confluence with Millers Creek downstream to its mouth at the Appomattox River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Bush River is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 6/26 samples taken at the Route 460 bridge (2-BSR002.82).

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Prince Edward

STREAM NAME: Briery Creek

HYDROLOGIC UNIT: 02080207

TMDL ID: VAC-J05R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 9.94 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Briery Creek Lake Dam

RIVER MILE: 9.94

LATITUDE: 37.20667 **LONGITUDE:** -78.44361

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Bush River

RIVER MILE: 0.00

LATITUDE: 37.28167 **LONGITUDE:** -78.35111

Briery Creek from Unnamed tributary to Briery Creek to confluence with Bush River

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Briery Creek is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 5/25 samples taken at 2-BRI001.00

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Cumberland

STREAM NAME: Angola Creek

HYDROLOGIC UNIT: 02080207

TMDL ID: VAC-J06R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 7.15 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 7.15

LATITUDE: 37.36861 **LONGITUDE:** -78.35028

DOWNSTREAM LIMIT:

DESCRIPTION: Appomattox River

RIVER MILE: 0.00

LATITUDE: 37.37611 **LONGITUDE:** -78.24139

Angola Creek from its headwaters to the confluence the Appomattox River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Angola Creek is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 9/10 samples taken at 2-ANG003.35 and 8/10 samples taken at 2-ANG001.27. Angola Creek is fully supporting but has an observed effect on the aquatic life use due to exceedances of the nutrient screening value. Total phosphorus exceeded the screening value in 3/10 samples taken at 2-ANG001.27.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform and phosphorous is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Cumberland

STREAM NAME: Horsepen Creek

HYDROLOGIC UNIT: 02080207

TMDL ID: VAC-J06R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.82 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 3.82

LATITUDE: 37.40333 **LONGITUDE:** -78.32750

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth at Big Guinea Creek

RIVER MILE: 0.00

LATITUDE: 37.42056 **LONGITUDE:** -78.27583

Horsepen Creek from its headwaters to the mouth at Big Guinea Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Horsepen Creek is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 6/11 samples taken at 2-HRP000.42, a former confined animal feeding operation (CAFO) special study station. Horsepen Creek is fully supporting but has an observed effect on the aquatic life use due to exceedances of the nutrient screening value. Total phosphorus exceeded the screening value in 3/9 samples taken at 2-HRP000.42.

IMPAIRMENT SOURCE: Unknown

The sources of fecal coliform and phosphorous unknown. There is not enough data to determine if the CAFO facility is the source of impairment in this segment.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Prince Edward, Nottoway, Amelia

STREAM NAME: Saylers Creek

HYDROLOGIC UNIT: 02080207

TMDL ID: VAC-J06R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 9.2 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 9.20

LATITUDE: 37.23917 **LONGITUDE:** -78.23944

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with the Appomattox River

RIVER MILE: 0.00

LATITUDE: 37.34278 **LONGITUDE:** -78.26139

Saylers Creek from its headwaters to the confluence with the Appomattox River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (1998), E. Coli (2004)

The segment was evaluated not supporting of the recreation use support goal based on a fecal coliform violation rate of 9/20 and a E. coli violation rate of 2/8 at the Route 619 bridge (2-SYL001.26).

Both the Fecal Coliform standard (400cfu/100mL or 200cfu/100mL for two or more samples over a calendar month) and the E. coli standard (235cfu/100mL or 126cfu/100mL for two or more samples over a calendar month) apply during the transition betweeen the Fecal Coliform standard and the recently approved E coli standard. Once a dataset of 12 or more samples are collected for E coli or after June 30, 2008 whichever comes first, only the new standard will apply.

IMPAIRMENT SOURCE: Unknown, Unknown

The source of the bacteria is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Cumberland

STREAM NAME: Big Guinea Creek

HYDROLOGIC UNIT: 02080207

TMDL ID: VAC-J06R-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 8.46 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 8.46

LATITUDE: 37.43060 **LONGITUDE:** -78.31400

DOWNSTREAM LIMIT:

DESCRIPTION: Appomattox River

RIVER MILE: 0.00

LATITUDE: 37.44070 **LONGITUDE:** -78.18560

Big Guinea Creek from its headwaters downstream to Appomattox River

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Big Guinea Creek is not supporting of the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 8/27 samples taken at 2-BGU001.39.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesterfield, Henrico, Richmond City

STREAM NAME: James River

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G01E-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 28.15 - Sq. Mi.

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Fall Line (Mayos Bridge)

RIVER MILE: 110.30

LATITUDE: 37.52810 **LONGITUDE:** -77.43500

DOWNSTREAM LIMIT:

DESCRIPTION: Appomattox River

RIVER MILE: 77.84

LATITUDE: 37.32400 **LONGITUDE:** -77.27920

Estuarine James River from the fall line at Mayos Bridge downstream to the Appomattox River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: e.Coli, Fecal Coliform

Assessed not supporting of the Recreation use support goal based on the results of a summer special study in the fall zone. The special study was designed to monitor the effects of summertime rain and combined sewer overflow (CSO) events on water quality in the James River and to monitor the effects of Richmond's CSO abatement efforts.

The segment has been included on the Impaired Waters list for fecal coliform since 1996. During the 2004 cycle, the bacteria standard changed to e.Coli for those stations with enough data. Some of the areas in this segment have converted to the e.Coli standard, for others the fecal coliform standard is still in effect. The TMDL for both is due in 2010.

IMPAIRMENT SOURCE: NPS - Urban, CSO

The source of the impairment in this section of the river is believed to be urban runoff from the tributary drainage basin and from combined sewer overflow events from the City of Richmond's combined sewer system.

The City is currently undertaking CSO abatement efforts. It is recommended that the ongoing CSO special study be continued to gauge the effects of CSO abatement efforts on water quality in this segment.

EPA believes nutrient overenrichment is impairing the aquatic life use in the James River. DEQ's addition of turbidity as an impairment cause is based on the best scientific information available since the EPA overlisted this segment in 1999 for nonattainment of aquatic life use due to nutrients.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesterfield, Henrico, Richmond City

STREAM NAME: James River

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G01E-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 25.18 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Fall line

RIVER MILE: 110.30

LATITUDE: 37.52810 **LONGITUDE:** -77.43500

DOWNSTREAM LIMIT:

DESCRIPTION: Flowerdew Hundred

RIVER MILE: 66.58

LATITUDE: 37.31890 **LONGITUDE:** -77.22170

Estuarine James River from the fall line to Flowerdew Hundred where the power lines cross the river about 7 miles from the Benjamin Harrison Bridge.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Fish Tissue - PCBs, VDH Fish Consumption Restriction

Considered not supporting of the Fish Consumption Use because a VDH Fish Consumption Restriction issued because of PCBs in multiple fish species at the following DEQ monitoring locations:
2-JMS098.64
2-JMS086.22
2-BLY000.55
2-JMS074.44
2-APP004.12
2-APP001.53
2-JMS066.88

IMPAIRMENT SOURCE: Unknown

The source of the PCBs is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY:

STREAM NAME: Falling Creek Reservoir

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G01L-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 110 - Acres

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Extent of backwater

RIVER MILE: 6.53

LATITUDE: 37.45750 **LONGITUDE:** -77.49480

DOWNSTREAM LIMIT:

DESCRIPTION: Dam

RIVER MILE: 3.76

LATITUDE: 37.46190 **LONGITUDE:** -77.46630

Falling Creek Reservoir

CLEAN WATER ACT GOAL AND USE SUPPORT:

Public Water Supply - Not Supporting

IMPAIRMENT CAUSE: Nutrients

The lake was assessed as not supporting the Public Water Supply Use during the 1998 cycle. The lake was subject to chronic problems resulting from nutrients and organic loadings. It no longer supports it original use as a public water supply.

IMPAIRMENT SOURCE: Unknown

Runoff from watershed

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Richmond City

STREAM NAME: Goode Creek

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G01R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.23 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Broad Rock Creek

RIVER MILE: 1.23

LATITUDE: 37.48710 **LONGITUDE:** -77.43780

DOWNSTREAM LIMIT:

DESCRIPTION: James River

RIVER MILE: 0.00

LATITUDE: 37.49870 **LONGITUDE:** -77.42410

Goode Creek from the confluence with Broad Rock Creek to its mouth at the James River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Goode Creek was assessed based on past sampling at GOD000.07 and a fecal coliform violation rate of 14/20 at 2-GOD000.77.

IMPAIRMENT SOURCE: Unknown

The source of the impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Henrico, Richmond City

STREAM NAME: Almond Creek

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G01R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.26 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 3.30

LATITUDE: 37.48670 **LONGITUDE:** -77.38310

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.50330 **LONGITUDE:** -77.41830

Almond Creek from its headwaters to its mouth at the James River, including unnamed tributaries.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting, Landfill Runoff

IMPAIRMENT CAUSE: Fecal Coliform, pH

Almond Creek was assessed not supporting of the Recreation use support goal based on a fecal coliform standard violation rate of 12/29 recorded at the Route 5 bridge (2-ALM000.42). The segment has been listed since the 1998 cycle, therefore the TMDL is due in 2010.

In 2004, the segment was also considered impaired of the Aquatic Life uses due to pH violations at 2-ALM000.42 as well as pH violations at station located downstream of the BFI landfill (2-XVO000.10 and 2-XVP000.04). The pH TMDL is due in 2016.

IMPAIRMENT SOURCE: Unknown, NPS - Urban

The source of the fecal coliform violations is considered unknown, but is suspected to be caused by urban runoff and combined sewer overflow discharges.

The pH impairment is believed to be caused by runoff from the landfill.

Targeted monitoring is necessary to further delineate the extent of the impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesterfield

STREAM NAME: Falling Creek

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G01R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.81 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Falling Creek Reservoir dam

RIVER MILE: 3.81

LATITUDE: 37.46190 **LONGITUDE:** -77.46630

DOWNSTREAM LIMIT:

DESCRIPTION: James River

RIVER MILE: 0.00

LATITUDE: 37.43650 **LONGITUDE:** -77.42800

Falling Creek from the Falling Creek Reservoir dam to its confluence with the James River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Falling Creek was assessed not supporting of the Recreation use support goal based on a fecal coliform standard violation rate of 10/49 recorded at 2-FAC000.85.

IMPAIRMENT SOURCE: Unknown

The source of the fecal contamination is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Henrico, Richmond City

STREAM NAME: Gillies Creek

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G01R-06

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.79 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 5.79

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: **LONGITUDE:**

Gillies Creek from its headwaters to its mouth at the James River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform, pH

pH 2/9 at 2-GIL000.42 (Government Road bridge)

FC 5/9 at 2-GIL000.42

IMPAIRMENT SOURCE: Unknown

Source is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesterfield, Richmond City

STREAM NAME: Pocoshock Creek

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G01R-07

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 8.33 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 8.33

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: **LONGITUDE:**

Pocoshock Creek from its headwaters to its mouth at Falling Creek Reservoir

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

DO 2/9 at 2-PSK000.23

IMPAIRMENT SOURCE: Unknown

Source is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesterfield

STREAM NAME: No Name Creek

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G01R-08

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.83 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 1.83

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: **LONGITUDE:**

UT to James River (aka No Name Creek) mainstem and tribs

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

FC 2/2 at 2-XTC000.08
FC 1/1 at 2-XUH000.01
FC 2/2 at 2-XUI000.01

IMPAIRMENT SOURCE: Unknown

Source is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesterfield

STREAM NAME: UT to James River

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G01R-09

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.35 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 0.35

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: **LONGITUDE:**

Ditch to James River through National Battlefield Park

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH

The ditch is considered impaired of the Aquatic Life use due to monitoring by the USGS:

DO 2/4, pH 2/4 at 0203853010
DO 2/4, pH 2/4 at 0203853030

IMPAIRMENT SOURCE: Unknown

Source is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Henrico

STREAM NAME: Fourmile Creek

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G02R-01

ASSESSMENT CATEGORY: 5A, 5C

SEGMENT SIZE: 30.99 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 8.69

LATITUDE: 37.48600 **LONGITUDE:** -77.34410

DOWNSTREAM LIMIT:

DESCRIPTION: James River

RIVER MILE: 0.00

LATITUDE: 37.40740 **LONGITUDE:** -77.30380

Fourmile Creek watershed from its headwaters to the mouth at the James River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform, pH

Fourmile Creek and its tributaries were assessed not supporting of the Aquatic Life use support goal based on pH standard violations recorded at stations 2-FOM003.60, 2-FOM001.85, 2-DLK001.19, 2-LK001.84, 2-BAY000.42, 2-BAY002.42, 2-XPZ000.02 (1994), 2-FOM006.87, 2-FOM005.49, 2-SWE000.88, 2-SWE001.50, 2-XTU000.96, 2-XTV001.69, 2-XTW001.19, and 2-XTX000.65. The segment was initially listed in 1998; the TMDL is due in 2010. The segment was extended during the 2002 cycle due to pH violations at the special study stations in the watershed.

The segment was assessed as not supporting of the Recreation use support goal based on a fecal coliform standard violation rate of 6/26 at the Route 5 bridge (2-FOM003.60). The segment was initially considered threatened in 1998 and downgraded to impaired in 2002; the TMDL is due in 2014.

IMPAIRMENT SOURCE: Unknown, Natural Conditions

The source of the pH violations is attributed to runoff from pine forests in the headwaters of the watershed.

The source of the fecal coliform violations is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesterfield, Henrico

STREAM NAME: Roundabout Creek

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G02R-02

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 2.14 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Pond at river mile 2.04

RIVER MILE: 2.04

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: **LONGITUDE:**

Mainstem of Roundabout Creek from the pond at approximately river mile 2.04 downstream to the mouth.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

pH 2/3 at 2-ROT001.15

IMPAIRMENT SOURCE: Natural Conditions

Source is considered unknown, but is suspected to be related to runoff from pine forests.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesterfield

STREAM NAME: Johnson Creek

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G02R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.76 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 5.76

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Tidal limit

RIVER MILE: 0.00

LATITUDE: **LONGITUDE:**

Johnson Creek from its headwaters to the mouth at the James River

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Dissolved Oxygen

IMPAIRMENT CAUSE: pH

DO 2/10, pH 3/10 at 2-JOD001.19

IMPAIRMENT SOURCE: Unknown

Source is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Henrico

STREAM NAME: Western Run

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G02R-04

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 3.03 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 3.03

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: **LONGITUDE:**

Western Run from its headwaters to its mouth at the confluence with Turkey Island Creek

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

pH 2/4 at 0203874275
pH 1/4 at 0203874250

IMPAIRMENT SOURCE: Natural Conditions

Source is considered unknown, but is suspected to be related to runoff from pine forests.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Henrico

STREAM NAME: Crewes Channel

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G02R-05

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 3.31 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 3.31

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: **LONGITUDE:**

Crewes Channel from its headwaters to its mouth at Turkey Island Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

pH 4/4 at 0203874770
pH 3/4 at 0203874785

IMPAIRMENT SOURCE: Natural Conditions

Source is considered unknown, but is suspected to be related to runoff from pine forests.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Hopewell, Prince George

STREAM NAME: Bailey Bay, Bailey Creek (tidal), Cattail Creek (tida

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G03E-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.29 - Sq. Mi.

INITIAL LISTING: 1994 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Fall line

RIVER MILE: 1.00

LATITUDE: 37.27720 **LONGITUDE:** -77.27990

DOWNSTREAM LIMIT:

DESCRIPTION: James River confluence

RIVER MILE: 0.00

LATITUDE: 37.29650 **LONGITUDE:** -77.25040

Segment begins at Bailey Creek fall line and extends downstream to its mouth at the confluence with the James River. The segment includes the tidal portion of Cattail Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting, Fish Tissue - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH, Fecal Coliform, e.Coli, Fish Tissue - PCBs

The segment was initially listed on the 1994 cycle 303(d) list because of excessive violations of the dissolved oxygen, fecal coliform, and ammonia standards.

For the 2004 303(d) list, the segment continues to be assessed as not supporting of the Recreation Use goal based on fecal coliform and e. Coli violations. The TMDLs are due in 2010.

The segment is assessed as not supporting the Aquatic Life use because of dissolved oxygen violations at 2-BLY000.65. The TMDL is due in 2010. In addition, pH violations were experienced at the Hopewell Region Monitoring and Assessment Project (HERMA) stations. The pH TMDL is due in 2016.

The segment has also had continuing problems with pesticides in sediment, excessive nutrients, and algal blooms. These are listed as non-impairing observed effects for the Aquatic Life Use. In addition, ammonia was removed from the list in the 1998 cycle because of the results of a mixing zone study. However, a violation of the acute ammonia standard was documented at the HERMA station BC-3. This station is within the chronic mixing zone area, not the allocated impact zone. Therefore ammonia is listed as an observed effect for both the Aquatic Life and Wildlife Uses.

The segment was assessed not supporting of the Fish Consumption Use beginning in 2002 because of PCBs in fish tissue during monitoring in 1997 and 2001. The PCB TMDL is due in 2016.

IMPAIRMENT SOURCE: Unknown, PS - Municipal/Industrial, NPS - Urban

Major point sources affecting water quality in this segment include the Hopewell Regional wastewater treatment facility (WWTF) and Honeywell's Hopewell Plant.

Fact Sheets for Category 5 Waters

A special study was initiated in 1997 to delineate the area affected by PCBs and PCBs in sediments and to determine a cause of the impairment. The mainstem James River from the fall line to Flowerdew Hundred is currently under a Fish Consumption Restriction for PCBs. Although Bailey Creek is not included in the restriction, a Toxics Source Assessment is currently underway which will attempt to identify PCB sources in the estuarine James basin.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Charles City, Chesterfield, Henrico, Prince George, Richmond City, Surry

STREAM NAME: James River

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G03E-02

ASSESSMENT CATEGORY: 5A, 5C

SEGMENT SIZE: 43.81 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Fall line

RIVER MILE: 110.30

LATITUDE: 37.52810 **LONGITUDE:** -77.43500

DOWNSTREAM LIMIT:

DESCRIPTION: Chickahominy River

RIVER MILE: 48.40

LATITUDE: 37.22490 **LONGITUDE:** -76.88900

The mainstem tidal James River from the Fall line to the Chickahominy River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Wildlife Goal - Not Supporting

IMPAIRMENT CAUSE: Nutrients/Eutrophication Biological Indicators (EPA Overlist), Chloride, Estuarine benthics

The James River from the Appomattox River to the Chickahominy River was originally listed on the 1998 list as fully supporting but threatened of the Aquatic Life Use goal based on chlorophyll a violations. During the 1998 cycle, EPA extended the segment upstream to the fall line and downgraded the river to not supporting the Aquatic Life Use, citing nutrient concerns.

The mainstem James River has acceptable dissolved oxygen levels. In addition the entire tidal freshwater portion (fall line to just above the Chickahominy River) has good benthic community based on the results from the Chesapeake Bay Benthic Index of Biological Community; therefore the James River from the fall line to the oligohaline boundary is considered impaired solely for Nutrients/Eutrophication Biological Indicators (EPA Overlist).

The oligohaline portion of the James River is impaired for benthics as determined by the Chesapeake Bay B-IBI study. Therefore, the segment is considered impaired for both benthics and the EPA overlist.

Nutrient screening criteria violations have continued to be reported in the area between the Appomattox and Queens Creek.
In addition, a chlorophyll a violation rate of 2/2 was recorded at the Henricus Park dock (2CJMS095.30), which is further upstream than the original threatened segment.

In the 2004 cycle, the James River from Brandon Point downstream to the Chickahominy River confluence was assessed as impaired of the Aquatic Life Use and Wildlife Uses due to chloride violations. The chloride TMDL is due in 2016.

IMPAIRMENT SOURCE: Unknown, Natural Conditions

The nutrient enrichment in the original segment is attributed to urban runoff and storm sewers. Upstream municipal and industrial point sources may be contributing sources.

The chloride violations are attributed to natural salinity.

The oligohaline benthic impairment is attributed to natural sediment conditions.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Charles City, Chesterfield, Hopewell, Prince George

STREAM NAME: James River

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G03E-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.31 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Appomattox River/Shand Creek

RIVER MILE: 77.84

LATITUDE: 37.32400 **LONGITUDE:** -77.27920

DOWNSTREAM LIMIT:

DESCRIPTION: Powell Creek

RIVER MILE: 70.00

LATITUDE: **LONGITUDE:**

The mainstem tidal James River from the confluence of the Appomattox River downstream to river mile 74.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The segment was initially listed as fully supporting but threatened of the Recreation Use during the 1998 cycle. During the 2002 cycle, the segment was downgraded to impaired. This cycle, the segment remains impaired based on a fecal coliform violation rate of 8/59 at 2-JMS075.04. The TMDL is due in 2014.
.

IMPAIRMENT SOURCE: NPS - Urban

The fecal coliform bacteria is attributed to urban runoff and storm sewers. Upstream municipal and industrial point sources may also be contributing sources. However, this has not been verified.

The source of the sediment contamination is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Charles City

STREAM NAME: Gunns Run

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G03R-01

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 4.64 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 8.30

LATITUDE: 37.37990 **LONGITUDE:** -77.11140

DOWNSTREAM LIMIT:

DESCRIPTION: UT at river mile 3.64

RIVER MILE: 3.31

LATITUDE: 37.34050 **LONGITUDE:** -77.10080

Gunns Run from its headwaters to an unnamed tributary at river mile 3.64.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH

In 1998, the entire mainstem of Gunns Run was assessed not supporting of the Aquatic Life use support goal based pH violations recorded at the Route 618 bridge (2-GUN004.00). The pH TMDL is due in 2010.

In the 2002 cycle, a pH and DO violation rate of 0/3 at 2-GUN002.58 between 1994 and 1997 was used to assess the lower reach as fully supporting. However, dissolved oxygen was also identified as an impairing cause. This TMDL is due in 2014.

During the year 2004 cycle, the pH and DO violations at 2-GUN004.00 continued (16/21 and 4/21, respectively.)

IMPAIRMENT SOURCE: Natural Conditions

The source of the pH and dissolved oxygen violations is believed to be natural conditions in the stream.

Targeted monitoring and wetland delineation is recommended to identify the limits of the segment affected by natural conditions. Such segments should be reclassified as wetlands where appropriate.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Hopewell, Prince George

STREAM NAME: Bailey Creek

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G03R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.54 - Miles

INITIAL LISTING: 1994 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 8.80

LATITUDE: 37.22080 **LONGITUDE:** -77.34310

DOWNSTREAM LIMIT:

DESCRIPTION: Fall line

RIVER MILE: 1.00

LATITUDE: 37.27720 **LONGITUDE:** -77.27990

Segment begins at the headwaters of Bailey Creek and extends downstream to the fall line.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fish Tissue - PCBs, aldrin, Fecal Coliform

Bailey Creek was initially included on the 303(d) list in 1994 based on water quality monitoring performed at the Route 10 bridge (2-BLY000.65) and historical water quality problems in Bailey Bay. The causes of impairment were excessive DO and fecal coliform standard violations recorded at 2-BLY000.65.

A special study was performed in 1997 and 1998 to delineate the area of impact. The tidal station 2-BLY000.65 continues to show impairment, however the riverine stations in Bailey Creek did not show impairment for dissolved oxygen in the 2002 cycle, therefore dissolved oxygen was removed as an impairment. It continued to show fecal coliform impairment.

In addition, the non-tidal portion of Bailey Creek was assessed in the 2002 cycle as impaired of the Fish Consumption Use goal because of exceedances of the human health screening levels for PCBs and aldrin in fish studies at station 2-BLY005.72 in 1997. Heptachlor epoxide was found in one species, so is considered an "observed effect." The TMDLs for aldrin and PCBs in fish are due in 2014.

IMPAIRMENT SOURCE: Unknown

The source of the impairment in Bailey Creek is currently unknown.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Charles City

STREAM NAME: West Run

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G03R-04

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 1.67 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: East Run

RIVER MILE:

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Harrison Lake

RIVER MILE:

LATITUDE: **LONGITUDE:**

West Run from the confluence with East Run downstream to the backwater of Harrison Lake.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

pH 5/10 at 2-WER001.93

IMPAIRMENT SOURCE: Natural Conditions

The source of the pH violations is believed to be natural conditions in the stream, however this has not been confirmed.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Prince George

STREAM NAME: Powell Creek

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G03R-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.92 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE:

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Tidal limit

RIVER MILE:

LATITUDE: **LONGITUDE:**

Powell Creek from its headwaters downstream to its tidal limit.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

FC 2/10 at 2-PWL005.73

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Hanover

STREAM NAME: Chickahominy River, UT - Unnamed Tributary

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G05R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.49 - Miles

INITIAL LISTING: 1994 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Tyson Plant discharge

RIVER MILE: 1.49

LATITUDE: 37.69840 **LONGITUDE:** -77.55020

DOWNSTREAM LIMIT:

DESCRIPTION: Chickahominy River confluence

RIVER MILE: 0.00

LATITUDE: 37.69010 **LONGITUDE:** -77.53520

Segment consists of the unnamed tributary of the Chickahominy River to which the Tyson Plant discharges.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

Biological monitoring of the receiving stream identified a moderately impaired benthic community downstream of the Tyson Plant (VPDES Permit No. VA0004031) discharge when compared to the benthic community immediately upstream of the discharge. This resulted in this segment being assessed as impaired of the Clean Water Act's Aquatic Life Use Support Goal for the 1994 305(b) report. Continued monitoring resulted in a similar assessment for the 1996, 1998, 2002 and current reports.

IMPAIRMENT SOURCE: Industrial Point Source

The source of the impairment is attributed to excessive nutrient overenrichment. The source of the nutrients is suspected to be the Tysons Plant discharge or runoff from the Tysons plant parking lot. This is currently being verified.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Henrico, Richmond City

STREAM NAME: Upham Brook Watershed

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G05R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 48.04 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 11.13

LATITUDE: 37.59720 **LONGITUDE:** -77.53850

DOWNSTREAM LIMIT:

DESCRIPTION: Chickahominy River confluence

RIVER MILE: 0.00

LATITUDE: 37.60810 **LONGITUDE:** -77.40550

Segment begins at the headwaters of Upham Brook and extends downstream to the confluence with the Chickahominy River, including all tributaries.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform, e. Coli

The segment was assessed not supporting of the Swimming Use support goal based on an e.Coli violation rate of 4/14 at DEQ's Ambient Monitoring Station 2-UPM003.53, located at the Brook Road (Rt. 1) bridge over Upham Brook, as well as excessive fecal coliform violation rates at the Richmond Regional PDC special study stations.

The segment was extended in the year 2002 cycle to include the entire watershed.

IMPAIRMENT SOURCE: NPS - Urban

The impairment in Upham Brook is attributed to urban nonpoint source runoff and other nonpoint sources in the watershed.

Targeted monitoring is necessary to further delineate the extent of impairment and to better characterize its causes and sources. A special study to monitor fecal coliform bacteria and other parameters in this watershed was initiated in 1996.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Hanover, Henrico

STREAM NAME: Chickahominy River

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G05R-04

ASSESSMENT CATEGORY: 5A, 5C

SEGMENT SIZE: 14.98 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE:

LATITUDE: 37.70150 **LONGITUDE:** -77.62680

DOWNSTREAM LIMIT:

DESCRIPTION: Stony Run

RIVER MILE:

LATITUDE: 37.60880 **LONGITUDE:** -77.40570

Chickahominy River from its headwaters to the confluence with Stony Run.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform, Dissolved Oxygen

The segment was assessed as impaired of the Recreation Use because of fecal coliform violation rates of 6/35 and 2/10 t 2-CHK076.59 and 2-CHK079.23, respectively.

The segment was assessed as impaired of the Aquatic Life Use goal based on a dissolved oxygen violation rate of 5/38 at 2-CHK076.59.

IMPAIRMENT SOURCE: Unknown, Natural Conditions

The source of the fecal coliform violations is considered unknown.

The dissolved oxygen violations are attributed to natural conditions.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Hanover, Henrico

STREAM NAME: Stony Run

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G05R-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.22 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Lickinghole Creek

RIVER MILE:

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: **LONGITUDE:**

Stony Run from the confluence with Lickinghole Creek downstream to its mouth at the Chickahominy River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The segment was assessed as impaired of the Recreation Use because of a fecal coliform violation rate of 2/9 at 2-SNF000.04.

IMPAIRMENT SOURCE: Unknown

The source of the fecal coliform violations is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Hanover, Henrico

STREAM NAME: Chickahominy River

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G06R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 10.3 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Route 360 bridge

RIVER MILE: 62.57

LATITUDE: 37.59530 **LONGITUDE:** -77.38250

DOWNSTREAM LIMIT:

DESCRIPTION: Route 156 bridge

RIVER MILE: 55.04

LATITUDE: 37.55190 **LONGITUDE:** -77.27140

Segment begins at the Route 360 bridge over the Chickahominy River, and extends downstream to the Route 156 bridge.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The segment was initially considered fully supporting but threatened of the Recreation Use in the 1998 cycle. During the year 2002, the segment was downgraded to impaired. In the 2004 cycle, the fecal coliform violation rates were 7/47 at 2-CHK062.57 and 9/47 at 2-CHK055.04.

IMPAIRMENT SOURCE: Unknown

The source of the fecal coliform standard violations is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY:

STREAM NAME: Chickahominy River

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G06R-01N

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 10.3 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Route 360 bridge

RIVER MILE: 62.57

LATITUDE: 37.59530 **LONGITUDE:** -77.38250

DOWNSTREAM LIMIT:

DESCRIPTION: Route 156 bridge

RIVER MILE: 55.04

LATITUDE: 37.55190 **LONGITUDE:** -77.27140

Segment begins at the Route 360 bridge over the Chickahominy River, and extends downstream to the Route 156 bridge.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH

The segment has been assessed as not supporting of the Aquatic Life use goal since 1996 based on dissolved oxygen and pH violations at the Route 360 bridge (2-CHK062.57) and at the Route 156 bridge (2-CHK055.04).

During the year 2004 cycle, the dissolved oxygen violation rates were 20/49 and 13/49, respectively. The pH violation rates were acceptable (4/49, 5/55), however, based on historical violations the impairment is still listed.

IMPAIRMENT SOURCE: Natural Conditions

The DO and pH violations are attributed to natural conditions in the watershed, but may be exacerbated by nonpoint source runoff.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize the causes and sources.

Targeted monitoring and wetland delineation is recommended to identify the limits of the segment affected by natural conditions. Such segments should be reclassified as wetlands where appropriate.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Henrico

STREAM NAME: White Oak Swamp

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G06R-03

ASSESSMENT CATEGORY: 5A, 5C

SEGMENT SIZE: 6.51 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: White Oak Swamp Creek

RIVER MILE: 6.70

LATITUDE: 37.48450 **LONGITUDE:** -77.36890

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.49310 **LONGITUDE:** -77.18120

White Oak Swamp from White Oak Swamp Creek downstream to its mouth at the Chickahominy River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: pH, Fecal Coliform

White Oak Swamp was assessed partially supporting of the Aquatic Life use support goal based on a pH standard violation rate of 20/94 recorded at the Route 156 bridge (2-WOS002.69).

The segment was assessed partially supporting of the Recreation use support goal based on a fecal coliform standard violation rate of 12/53 recorded at 2-WOS002.69.

IMPAIRMENT SOURCE: Natural conditions, Unknown

The source of the fecal coliform standard violations is considered unknown.

The pH impairment is attributed to natural conditions.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Henrico

STREAM NAME: Canal Swamp

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G06R-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.94 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 2.94

LATITUDE: 37.49260 **LONGITUDE:** -77.24390

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.46750 **LONGITUDE:** -77.21810

Canal Swamp from its headwaters to its mouth at White Oak Swamp.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

Canal Swamp was assessed as not supporting of the Aquatic Life Use in 2004 based on a pH standard violations at USGS station 02042454 and DEQ station 2-CNS000.54.

IMPAIRMENT SOURCE: Unknown

The sources of the pH violations is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Hanover

STREAM NAME: Beaverdam Creek

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G06R-06

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.05 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 6.05

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: **LONGITUDE:**

Canal Swamp from its headwaters to its mouth at White Oak Swamp.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

Beaverdam Creek is assessed as not supporting of the Aquatic Life Use based on a pH standard violation rate of 3/4 at USGS station 02042433.

IMPAIRMENT SOURCE: Unknown

The source of the pH violations is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Hanover

STREAM NAME: Boatswain Creek

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G06R-07

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.41 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 3.41

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: **LONGITUDE:**

Boatswain Creek from its headwaters to its mouth at the Chickahominy River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

Boatswain Creek is assessed as not supporting of the Aquatic Life Use based on a pH standard violation rate of 3/4 at USGS station 0204243830 and 2/4 at USGS station 02043790.

IMPAIRMENT SOURCE: Unknown

The source of the pH violations is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Henrico

STREAM NAME: White Oak Swamp

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G06R-08

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 3.47 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE:

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: White Oak Swamp Creek

RIVER MILE: 6.70

LATITUDE: **LONGITUDE:**

White Oak Swamp from its headwaters to the confluence with White Oak Swamp Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

White Oak Swamp is assessed as not supporting of the Aquatic Life Use based on a pH standard violation rate of 2/3 at 8-WOS008.15. This is a TMDL station to address the pH impairment further downstream.

IMPAIRMENT SOURCE: Natural conditions

The source of the pH violations is attributed to natural conditions.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Henrico

STREAM NAME: White Oak Swamp Creek

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G06R-09

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 3.9 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 3.90

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: **LONGITUDE:**

White Oak Swamp Creek from its headwaters to the its mouth at White Oak Swamp.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

White Oak Swamp Creek is assessed as not supporting of the Aquatic Life Use based on a pH standard violation rate of 3/3 at 2-WSC002.00 and 2-WSC002.62. These are TMDL stations to address the pH impairment further downstream.

IMPAIRMENT SOURCE: Natural conditions

The source of the pH violations is attributed to natural conditions.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Henrico

STREAM NAME: Deep Run

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G06R-10

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.33 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 2.33

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: **LONGITUDE:**

Deep Run from its headwaters to the its mouth at White Oak Swamp.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

Deep Run is assessed as not supporting of the Aquatic Life Use based on a pH standard violation rate of 3/3 at 2-DER000.65. This is a TMDL station to address the pH impairment in White Oak Swamp.

IMPAIRMENT SOURCE: Unknown

The source of the pH violations is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Hanover

STREAM NAME: Bloody Run

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G06R-11

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.05 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 1.05

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: **LONGITUDE:**

Bloody Run from its headwaters to the its mouth at Powhite Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH, Dissolved Oxygen

Bloody Run is assessed as not supporting of the Aquatic Life Use based on pH violations at USGS stations 0204243610 and 0204243650 and dissolved oxygen violations at 0204243610.

IMPAIRMENT SOURCE: Unknown

The source of the violations is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY:

STREAM NAME: Chickahominy Lake

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G07L-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1500 - Acres

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Extent of Backwater

RIVER MILE:

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Dam

RIVER MILE: 24.00

LATITUDE: 37.40640 **LONGITUDE:** -76.92860

Chickahominy Lake

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

Chickahominy Lake was included on EPA's 1998 list of "Waters Identified to Virginia for Listing Consideration During Development of Next List." No parameter of concern was listed.

Low dissolved oxygen in the lake's bottom waters at station 2-CHK025.15 cause the lake to be listed as not supporting the aquatic life use.

IMPAIRMENT SOURCE: Unknown, Nutrient Overenrichment, Unknown

The source of the dissolved oxygen violations is unknown but is believed to be exacerbated by nutrient overenrichment.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Charles City

STREAM NAME: Collins Run

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G07R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.36 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 4.35

LATITUDE: 37.40070 **LONGITUDE:** -77.09160

DOWNSTREAM LIMIT:

DESCRIPTION: River mile 0.99

RIVER MILE: 0.99

LATITUDE: 37.41780 **LONGITUDE:** -77.03390

Collins Run from its headwaters to approximately river mile 0.99.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: pH, Fecal Coliform

The segment was assessed not supporting of the Recreation and Aquatic Life Uses because of fecal coliform and pH violations at two locations.

FC 5/12 at 2-CNR001.16;
FC 4/12 at 2-CNR001.54.

pH 2/12 at 2-CNR001.16;
pH 2/12 at 2-CNR001.54.

These stations are part of a confined animal feeding operation special study.

IMPAIRMENT SOURCE: Unknown

The source of the fecal and pH impairments is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: New Kent

STREAM NAME: Rumley Marsh

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G07R-02

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 5.8 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 7.40

LATITUDE: 37.52960 **LONGITUDE:** -77.03240

DOWNSTREAM LIMIT:

DESCRIPTION: Old Forge Pond

RIVER MILE: 0.00

LATITUDE: 37.45900 **LONGITUDE:** -77.04470

Rumley Marsh from tits headwaters to Old Forge Pond. Below Old Forge Pond, the stream name is Jones Run.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

Special studies conducted in Rumley Marsh and Jones Run in 1994 identified summertime DO violations in Rumley Marsh at station 2-RUM002.46.

The segment was threatened in 1998 and downgraded in 2002. More monitoring needs to be conducted to verify impairment.

IMPAIRMENT SOURCE: Natural Conditions

The summertime DO violations are attributed to natural swampwater conditions in Rumley Marsh.

Targeted monitoring and wetland delineation is recommended to identify the limits of the segment affected by natural conditions. Such segments should be reclassified as wetlands where appropriate.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Charles City, New Kent

STREAM NAME: Chickahominy River

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G07R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 11.54 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Possum Run

RIVER MILE:

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Chickahominy Lake

RIVER MILE:

LATITUDE: **LONGITUDE:**

The Chickahominy River from the confluence with Possum Run downstream to the extent of backwater from Chickahominy Lake.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The segment was assessed as impaired of the Recreation Use goal based on a fecal coliform violation rate of 6/40 at 2-CHK032.77.

IMPAIRMENT SOURCE: Unknown

The source of the fecal coliform violations is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Charles City

STREAM NAME: Collins Run

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G07R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.99 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: River mile 0.99

RIVER MILE: 0.99

LATITUDE: 37.41780 **LONGITUDE:** -77.03390

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: **LONGITUDE:**

Collins Run from approximately river mile 0.99 downstream to its mouth.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The segment was assessed not supporting of the Recreation Use because of fecal coliform at 2-CNR000.89.

This station is part of a confined animal feeding operation special study.

IMPAIRMENT SOURCE: Unknown

The source of the fecal impairments is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Charles City, James City, New Kent

STREAM NAME: Chickahominy River

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G08E-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.31 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Walkers Dam

RIVER MILE: 24.00

LATITUDE: 37.40640 **LONGITUDE:** -76.93830

DOWNSTREAM LIMIT:

DESCRIPTION: Diascund Creek

RIVER MILE: 15.91

LATITUDE: 37.37920 **LONGITUDE:** -76.90360

The segment begins at Walkers Dam and extends downstream to the confluence with Diascund Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: pH, PCBs

The Chickahominy River was included on EPA's list of "Waters Identified to Virginia for Listing Consideration During Development of the Next List" in 1998. pH was listed as the parameter of concern. During the 2002 cycle, the segment was downgraded as impaired, therefore the TMDL is due in 2010. This cycle the pH violation rate was 6/51at 2-CHK023.64.

In the 2004 cycle, the segment was assessed as not supporting the Fish Consumption Use because the DEQ screening value for PCBs was exceeded in 3 species during sampling in 2001. The PCB TMDL is due in 2016.

IMPAIRMENT SOURCE: Unknown

The source of the impairment in this segment is currently considered unknown.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Charles City, James City

STREAM NAME: Chickahominy River

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G08E-02

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 5.47 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Diascund Creek

RIVER MILE: 15.91

LATITUDE: 37.37920 **LONGITUDE:** -76.90360

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: **LONGITUDE:**

The segment begins at Diascund Creek and extends downstream to the mouth at the James River

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Wildlife Use - Not Supporting

IMPAIRMENT CAUSE: Chloride

The Chickahominy River was assessed as not supporting the Aquatic Life and Wildlife Uses because of chloride violations at 2-CHK002.17, 2-CHK006.14, and 2-CHK0014.33.

IMPAIRMENT SOURCE: Natural Conditions

The violations are attributed to natural salinity.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Charles City

STREAM NAME: Morris Creek

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G08R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 7.72 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 13.70

LATITUDE: 37.35670 **LONGITUDE:** -77.01820

DOWNSTREAM LIMIT:

DESCRIPTION: Tidal Limit

RIVER MILE: 6.00

LATITUDE: 37.31940 **LONGITUDE:** -76.93850

Morris Creek from its headwaters downstream to the tidal limit at river mile 5.97.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH, Fecal Coliform

Morris Creek was assessed not supporting of the Aquatic Life use support (ALUS) goal based on water quality monitoring performed at the Route 623 bridge (2-MOC005.97). Relative to the ALUS assessment, there were 10 violations of the DO standard, and 13 violations of the pH standard, recorded in 22 samples collected. The segment initially listed in 1998, therefore the DO and pH TMDLs are due in 2010.

The segment was assessed not supporting of the Recreation use support goal based on a fecal coliform violation rate of 3/20 recorded at 2-MOC005.97. The segment was listed as threatened in 1998, and then downgraded to impaired during the 2002 cycle, therefore the TMDL is due in 2014.

IMPAIRMENT SOURCE: Unknown

The source of the impairment in this stream segment is currently considered unknown.

Continued monitoring is recommended to increase the data set and make a confident assessment. Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: James City

STREAM NAME: Mill Creek

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G08R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.29 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE:

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Tidal Limit

RIVER MILE:

LATITUDE: **LONGITUDE:**

Mill Creek from its headwaters downstream to its tidal limit

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH, Fecal Coliform

Mill Creek was assessed not supporting of the Aquatic Life use support (ALUS) goal based on water quality monitoring performed at the Route 603 bridge (2-MCR002.38). Relative to the ALUS assessment, there were 3 violations of the DO standard, and 2 violations of the pH standard, recorded in 10 samples collected.

The segment was assessed not supporting of the Recreation use support goal based on a fecal coliform violation rate of 3/10 recorded at 2-MCR002.38.

IMPAIRMENT SOURCE: Unknown

The source of the impairment in this stream segment is currently considered unknown.

Continued monitoring is recommended to increase the data set and make a confident assessment. Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: New Kent

STREAM NAME: Beaverdam Creek

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G09R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.06 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 4.20

LATITUDE: 37.50320 **LONGITUDE:** -76.93210

DOWNSTREAM LIMIT:

DESCRIPTION: Diascund Reservoir

RIVER MILE: 0.00

LATITUDE: 37.46370 **LONGITUDE:** -76.90050

All of Beaverdam Creek tributary to Diascund Reservoir.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, Fecal Coliform

Beaverdam Creek was assessed not supporting of the Aquatic Life use because of a dissolved oxygen standard violation rate of 6/19 at the Route 632 bridge (2-BDM004.12). The segment was initially considered fully supporting but threatened in the 1998 cycle, but was downgraded to impaired in the 2002 cycle. The DO TMDL is due in 2014.

In the 2004 cycle, the segment was also assessed as not supporting the Recreation Use goal based on a fecal coliform violation rate of 3/19 at 2-BDM004.12. The fecal coliform TMDL is due in 2016.

IMPAIRMENT SOURCE: Unknown

The source of the dissolved oxygen violations in this segment is considered unknown, but may be attributable to high total phosphorus in the segment.

The source of the fecal coliform violation is considered unknown.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: New Kent

STREAM NAME: Diascund Creek

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G09R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.89 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 16.93

LATITUDE: 37.52230 **LONGITUDE:** -77.00670

DOWNSTREAM LIMIT:

DESCRIPTION: Diascund Reservoir

RIVER MILE: 10.13

LATITUDE: 37.45590 **LONGITUDE:** -76.94440

All of Diascund Creek from its headwaters to the Diascund Reservoir.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Public Water Supply Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform, Iron, Manganese

Diascund Creek was assessed not supporting of the Recreation Use based on a fecal coliform violation rate of 4/19 at the Route 628 bridge (2-DSC012.67). The segment was initially listed in 2002, therefore the fecal coliform TMDL is due in 2014.

During the 2004 cycle, there were violations of the human health criteria for iron and manganese in public water supplies. The criteria are set to maintain acceptable taste, odor or aesthetic quality of drinking water.. Therefore, the segment is considered impaired of the Public Water Supply use. The TMDL is due in 2016.

IMPAIRMENT SOURCE: Unknown

The source of the impairment is considered unknown.

Continued monitoring is necessary to increase the data set and make a confident assessment.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Cumberland, Fluvanna, Goochland, Powhatan

STREAM NAME: James River

HYDROLOGIC UNIT: 02080205

TMDL ID: VAP-H33R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 22.87 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Rivanna River

RIVER MILE: 166.61

LATITUDE: 37.75030 **LONGITUDE:** -78.16410

DOWNSTREAM LIMIT:

DESCRIPTION: Big Lickinghole Creek

RIVER MILE: 143.35

LATITUDE: 37.68930 **LONGITUDE:** -77.93090

Segment comprises the James River from the Rivanna River to Big Lickinghole Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Fish Consumption Use - Observed Effect

IMPAIRMENT CAUSE: Fecal Coliform, Arsenic & PCB in fish tissue

This segment was assessed as not supporting of the Recreation Use based on a fecal coliform violation rate of 4/35 at the Route 45 bridge (2-JMS157.28).

The segment was considered fully supporting of the Aquatic Life Use with Observed Effects due to a Total Phosphorus violation rate of 25/172 at the Route 45 bridge.

In addition, the segment was also considered fully supporting of the Fish Consumption Use with Observed Effects due to elevated arsenic and PCBs in carp in 2001.

IMPAIRMENT SOURCE: Unknown, Unknown

The source of the impairments is considered unknown.

The source of the observed effects is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Powhatan

STREAM NAME: Deep Creek

HYDROLOGIC UNIT: 02080205

TMDL ID: VAP-H33R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 11.41 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Maxey Mill Creek confluence

RIVER MILE: 14.20

LATITUDE: 37.51330 **LONGITUDE:** -78.10900

DOWNSTREAM LIMIT:

DESCRIPTION: Route 684 bridge

RIVER MILE: 3.00

LATITUDE: 37.60420 **LONGITUDE:** -77.99970

Segment begins at the confluence of Deep Creek with Maxey Mill Creek, and extends downstream to the Route 684 bridge.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

Segment assessed not supporting for Aquatic Life use support based on a dissolved oxygen violation rate of 2/9 at 2-DCR007.93. There were also DO violations at three 1994 special study stations along Deep Creek (2-DCR013.89, 2-DCR012.54, 2-DCR008.85.) The ambient station at 2-DCR003.00 has acceptable dissolved oxygen (1/22) this cycle.

This segment was shortened in 2002 to end at the Route 684 bridge (11.2 miles) because a downstream dam provides reaeration.

The segment was mistakenly listed for temperature during the year 2002 cycle based on citizen monitoring data. This data had been rejected because of poor QA/QC. Temperature should be removed as an impairing cause.

IMPAIRMENT SOURCE: Unknown

The source of the impairment in this stream segment is currently considered unknown.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Powhatan

STREAM NAME: Stegers Creek

HYDROLOGIC UNIT: 02080205

TMDL ID: VAP-H33R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.58 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 4.58

LATITUDE: 37.55580 **LONGITUDE:** -77.94650

DOWNSTREAM LIMIT:

DESCRIPTION: Sallee Creek

RIVER MILE: 0.00

LATITUDE: 37.57780 **LONGITUDE:** -78.00570

Segment comprises Stegers Creek from its headwaters to the confluence with Sallee Creek, including upper and lower Powhatan Lakes.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

This segment was assessed as not supporting of the Aquatic Life Use goals in the 2002 cycle based on dissolved oxygen standard exceedances at three special study stations (2-STG002.00, 2-STG000.91, 2-STG000.21).

IMPAIRMENT SOURCE: Impoundment

The DO violations in this segment are attributed to natural conditions (swamps). The source for the antimony violation is unknown. Continued monitoring to increase the data set and make a confident assessment is recommended. Targeted monitoring and wetland delineation may be necessary to identify the limits of the segment affected by natural conditions. Such segments should be reclassified as wetlands.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Fluvanna, Goochland, Louisa

STREAM NAME: Byrd Creek

HYDROLOGIC UNIT: 02080205

TMDL ID: VAP-H34R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 25.97 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 25.97

LATITUDE: 37.95120 **LONGITUDE:** -78.16410

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.72380 **LONGITUDE:** -78.09460

Segment comprises all of Byrd Creek, from its headwaters to its mouth at the Little River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The segment was initially considered fully supporting but threatened of the Recreation Use in 1998. It was later identified by EPA for listing consideration. In the 2002 cycle, the segment was downgraded to impaired of the Recreation use support goal based on a fecal coliform standard violations recorded at the Route 603 bridge (2-BYR003.35); therefore the TMDL is due in 2010. During the 2004 cycle, the violation rate was 3/21.

IMPAIRMENT SOURCE: Unknown

The source of the impairment is considered unknown.

Continued monitoring is recommended to increase the data set and make a confident assessment. Targeted monitoring may be necessary to further delineate the segment and characterize the causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Goochland

STREAM NAME: Big Lickinghole Creek, Little Lickinghole Creek

HYDROLOGIC UNIT: 02080205

TMDL ID: VAP-H37R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 29.54 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 11.96

LATITUDE: 37.69440 **LONGITUDE:** -77.95910

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth of Big Lickinghole Creek

RIVER MILE: 0.00

LATITUDE: 37.68950 **LONGITUDE:** -77.93100

The mainstems of Big Lickinghole Creek and Little Lickinghole Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The creeks are considered impaired of the Recreation use support goals based on water quality monitoring performed at the confluence of Big Lickinghole Creek and Little Lickinghole Creek (2-BLG002.60). The fecal coliform violation rate was 6/20.

IMPAIRMENT SOURCE: Unknown

The source of the fecal coliform violation is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Powhatan

STREAM NAME: Fine Creek

HYDROLOGIC UNIT: 02080205

TMDL ID: VAP-H38R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 10.34 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 10.34

LATITUDE: 37.55630 **LONGITUDE:** -77.93560

DOWNSTREAM LIMIT:

DESCRIPTION: James River confluence

RIVER MILE: 0.00

LATITUDE: 37.60640 **LONGITUDE:** -77.81530

Segment comprises all of Fine Creek from its headwaters to the confluence with the James River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Fine Creek was assessed not supporting of the Recreation Use goal based on a fecal coliform violation rate of 5/31 at the Route 711 bridge (2-FIN000.81.)

IMPAIRMENT SOURCE: Unknown

The source of the fecal coliform violations is considered to be unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Goochland, Powhatan, Louisa

STREAM NAME: Beaverdam Creek

HYDROLOGIC UNIT: 02080205

TMDL ID: VAP-H38R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 8.73 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 8.60

LATITUDE: 37.74520 **LONGITUDE:** -77.80300

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.63430 **LONGITUDE:** -77.82880

Segment comprises all of Beaverdam Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Beaverdam Creek is considered impaired of the Recreation Use goal based on a fecal coliform violation rate of 4/21 at the first bridge downstream of Route 6.

IMPAIRMENT SOURCE: Unknown

The source of the fecal coliform is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Goochland, Powhatan

STREAM NAME: James River

HYDROLOGIC UNIT: 02080205

TMDL ID: VAP-H38R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.64 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Mohawk Creek

RIVER MILE:

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: River mile 137

RIVER MILE: 137

LATITUDE: **LONGITUDE:**

The James River from the confluence of Mohawk Creek downstream to river mile 137.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment was assessed not supporting of the Recreation Use based on a violation rate of 2/10 at the Route 522 bridge (2-JMS140.00.)

IMPAIRMENT SOURCE: Unknown

The source of the fecal coliform violations is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Goochland

STREAM NAME: UT to UT to James River

HYDROLOGIC UNIT: 02080205

TMDL ID: VAP-H38R-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.42 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Four Seasons Laundry lagoon

RIVER MILE: 0.42

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: **LONGITUDE:**

Segment comprises the unnamed tributary XVV from the Four Seasons laundry lagoon discharge to the mouth

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment was assessed not supporting of the Recreation Use based on fecal coliform violations (2/2) in the ditch below the lagoon.

IMPAIRMENT SOURCE: Point Source - Industrial

The source of fecal coliform is attributed to a point source discharge of laundry waste .

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Goochland, Hanover, Henrico

STREAM NAME: Tuckahoe Creek Watershed

HYDROLOGIC UNIT: 02080205

TMDL ID: VAP-H39R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: - Miles

INITIAL LISTING: 1994 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE:

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: **LONGITUDE:**

The Tuckahoe Creek watershed

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting, Public Water Supply Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH, Fecal Coliform, Sulfate

In 1998, Tuckahoe Creek from the Route 6 bridge to its mouth (4.74 miles) was considered impaired of the Aquatic Life and Recreation uses based on fecal coliform and dissolved oxygen violations at the Route 6 bridge (2-TKO004.69). Tuckahoe Creek upstream of the bridge and several tributaries were considered threatened. The TMDLs for this original segment are due by 2010.

In 2002, the portion of Tuckahoe Creek from the Route 6 bridge upstream to the confluence with Little Tuckahoe Creek was added to the impaired waters list. In addition, Little Tuckahoe Creek and the upper portion of Deep Run were added to the list for fecal coliform and dissolved oxygen. These TMDLs (13.75 total miles) are due by 2014.

Pre-TMDL monitoring in the watershed was conducted of the impaired and previously threatened segments during the year 2004 cycle. Additional tributaries were identified as impaired, with TMDLs due by 2016. The summary mileage of the impairments is as follows:

Aquatic Life Use
Dissolved Oxygen 44.28 miles
pH 4.74 miles

Recreation Use
Fecal Coliform 22.36 miles
e. Coli 9.74 miles

In addition, 9.99 miles of stream were considered impaired of the Public Water Supply Use due to an exceedance of the Sulfate standard. This TMDL is due by 2016.

IMPAIRMENT SOURCE: NPS - Urban, Unknown, Natural Conditions

The specific cause of the DO problem in Tuckahoe Creek is considered unknown, although organic enrichment and excessive nutrients from urban nonpoint source runoff and natural low flow conditions are suspected to be contributing to the problem.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesterfield, Richmond City

STREAM NAME: Powhite Creek

HYDROLOGIC UNIT: 02080205

TMDL ID: VAP-H39R-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 8.12 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 8.12

LATITUDE: 37.53210 **LONGITUDE:** -77.60010

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.53860 **LONGITUDE:** -77.50010

Powhite Creek from its headwaters to its mouth at the James River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The segment was assessed not supporting of the Recreation use goals based on a fecal coliform standard violation rate of 6/28 at the Route 635 (Forest Hill Avenue) bridge (2-PWT000.57.)

IMPAIRMENT SOURCE: Unknown

The source of the fecal coliform bacteria is unknown, but is suspected to be urban runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Richmond City

STREAM NAME: Reedy Creek

HYDROLOGIC UNIT: 02080205

TMDL ID: VAP-H39R-06

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.68 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 3.68

LATITUDE: 37.50910 **LONGITUDE:** -77.51680

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.52440 **LONGITUDE:** -77.46960

Segment comprises Reedy Creek from its headwaters to its mouth at the James River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The segment was initially listed as threatened of the Recreation Use during the year 1998 cycle. The segment was downgraded to impaired in the year 2002 assessment.

In 2004, the segment was assessed not supporting of the Recreation use support goal based on a fecal coliform standard violation rate of 7/18 recorded on Riverside Drive in the City of Richmond (2-RDD000.19).

IMPAIRMENT SOURCE: NPS - Urban

The fecal coliform standard violations are attributed to urban runoff and storm sewers upstream in the watershed. However, additional monitoring is necessary to increase the data set and make a confident assessment.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Richmond City

STREAM NAME: James River

HYDROLOGIC UNIT: 02080205

TMDL ID: VAP-H39R-08

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.34 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: William's Island Dam

RIVER MILE: 116.30

LATITUDE: 37.55830 **LONGITUDE:** -77.52720

DOWNSTREAM LIMIT:

DESCRIPTION: Fall Line (Mayos Bridge)

RIVER MILE: 110.30

LATITUDE: 37.53040 **LONGITUDE:** -77.43400

Segment begins at the William's Island Dam at river mile 116.30 and extends downstream to the fall line of the James River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The James River was assessed not supporting of the Recreation use support goal based on the results of a summer special study in the fall zone. The special study was designed to monitor the effects of summertime rain and combined sewer overflow (CSO) events on water quality in the James River and to monitor the effects of Richmond's CSO abatement efforts. The special study data used representative conditions before completion of CSO abatement projects.

For the 2004 cycle, the segment was assessed as not supporting for the Recreation use support goal based on violations of the e. Coli and fecal coliform standards. The segment was extended upstream from the 1998 cycle during the 2002 assessment. The TMDL for the original portion (Boulevard Bridge to Fall Line) is due in 2010, but the TMDL for the upstream portion is not due until 2014.

IMPAIRMENT SOURCE: NPS - Urban, CSO

The source of the impairment in this section of the river is believed to be urban runoff from the tributary drainage basin and from combined sewer overflow events from the City of Richmond's combined sewer system.

The City is currently undertaking CSO abatement efforts. It is recommended that the ongoing CSO special study be continued to gauge the effects of CSO abatement efforts on water quality in this segment.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY:

STREAM NAME: James River

HYDROLOGIC UNIT: 02080205

TMDL ID: VAP-H39R-09

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.29 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Boulevard Bridge

RIVER MILE: 113.50

LATITUDE: 37.53150 **LONGITUDE:** -77.48440

DOWNSTREAM LIMIT:

DESCRIPTION: Fall Line (Mayos Bridge)

RIVER MILE: 110.30

LATITUDE: 37.53040 **LONGITUDE:** -77.43400

Segment begins at the Boulevard Bridge and extends downstream to the fall line of the James River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic), Dissolved Oxygen

The James River was assessed not supporting of the Aquatic Life use support goal based on the results of biological (benthic) monitoring at station JMS110.34 and JMS110.44, which indicated moderately impaired benthic communities when compared to the control station at JMS115.29. Acanthamoeba (an amoebae that inhabits lesions in fish and has a remote chance of having human health effects) was detected in lesions in fish taken from the James River near Mayo Bridge in September 1997.

In addition, scattered stations within the segment had exceedances of the dissolved oxygen violation rate. The DO TMDL is due in 2014.

IMPAIRMENT SOURCE: NPS - Urban, CSO

The source of the impairment in this segment is believed to be urban runoff from the tributary drainage basin and from combined sewer overflow (CSO) events from the City of Richmond's combined sewer system.

The City of Richmond is currently undertaking CSO abatement efforts. The special monitoring study should be continued to gauge the effects of the CSO abatement efforts on monitored fecal coliform levels.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesterfield, Powhatan

STREAM NAME: Bernards Creek

HYDROLOGIC UNIT: 02080205

TMDL ID: VAP-H39R-10

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.97 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 6.97

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: **LONGITUDE:**

The mainstem of Bernards Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Bernards Creek was assessed as impaired of the Recreation Use based on a fecal coliform violation rate of 7/30 at the Route 711 bridge (2-BOR001.73).

IMPAIRMENT SOURCE: Unknown

The source of the fecal coliform violations is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Henrico, Powhatan, Richmond City

STREAM NAME: James River

HYDROLOGIC UNIT: 02080205

TMDL ID: VAP-H39R-11

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 10.06 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Tuckahoe Creek confluence

RIVER MILE:

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: William's Island dam

RIVER MILE: 116.30

LATITUDE: **LONGITUDE:**

The mainstem of the James River between the confluence of Tuckahoe Creek and William's Island dam.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The James River is assessed not supporting of the Recreation Use based on a fecal coliform violation rate of 6/46 at 2-JMS117.35.

IMPAIRMENT SOURCE: Unknown

The source of the fecal coliform violations is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesterfield, Powhatan

STREAM NAME: Skinquarter Creek

HYDROLOGIC UNIT: 02080207

TMDL ID: VAP-J07R-01

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 7 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 7.67

LATITUDE: 37.47690 **LONGITUDE:** -77.80240

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.41820 **LONGITUDE:** -77.85520

Skinquarter Creek from its headwaters to its mouth at the Appomattox River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH

Skinquarter Creek was assessed not supporting of the Aquatic Life use support goal based on water quality monitoring performed at the Route 603 bridge (2-SQT001.54). There were 6 violations of the DO standard and 13 violations of the pH standard in 20 samples.

IMPAIRMENT SOURCE: Natural Conditions

The source of the DO and pH violations is attributed to natural conditions in the watershed.

Targeted monitoring and wetland delineation may be necessary to identify the limits of the segment affected by natural conditions. Such segments should be reclassified as wetlands where appropriate.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Amelia, Chesterfield

STREAM NAME: Flat Creek

HYDROLOGIC UNIT: 02080207

TMDL ID: VAP-J08R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.99 - Miles

INITIAL LISTING: 1994 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Nibbs Creek Confluence

RIVER MILE: 4.10

LATITUDE: 37.40220 **LONGITUDE:** -77.93380

DOWNSTREAM LIMIT:

DESCRIPTION: Appomattox River confluence

RIVER MILE: 0.00

LATITUDE: 37.39160 **LONGITUDE:** -77.87400

Flat Creek from Nibbs Creek to the Appomattox River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Flat Creek was assessed not supporting of the Recreation use support goal based on a fecal coliform standard violation rate of 11/28 recorded at the Route 604 bridge (2-FLA001.95).

IMPAIRMENT SOURCE: PS - Municipal, NPS - Agriculture

It is suspected that the Amelia Courthouse STP, which discharges to Nibbs Creek, may have been a contributing source. A new wastewater treatment plant was completed in 1994 as a control measure, and is expected to have a positive effect on water quality in the receiving stream. It is suspected that the problems may also be caused be nonpoint source runoff in the watershed, and continued monitoring is recommended to evaluate whether water quality is improving.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Amelia

STREAM NAME: Nibbs Creek

HYDROLOGIC UNIT: 02080207

TMDL ID: VAP-J09R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.43 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Amelia Courthouse STP

RIVER MILE: 6.45

LATITUDE: 37.36720 **LONGITUDE:** -77.99170

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth at Flat Creek

RIVER MILE: 0.00

LATITUDE: 37.40220 **LONGITUDE:** -77.93380

Nibbs Creek from Amelia Courthouse Sewage Treatment Plant to confluence with Flat Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Nibbs Creek was assessed in 1998 as fully supporting but threatened of the Recreation use goals based on sampling at the Route 609 bridge. The segment was identified to Virginia for listing consideration during the next cycle. The segment was subsequently listed as impaired during the 2002 cycle, therefore the TMDL is due in 2010.

This cycle, the segment was considered not supporting of the Recreation use goal based on widespread fecal coliform violations

Fecal coliform 13/28 at the Rt. 609 bridge (2-NBB003.65);
Hog farm special study stations:
Fecal coliform 12/16 at the Rt. 630 bridge (2-NBB002.92 and previously called PL-43A),
Fecal coliform 8/17 at the Rt. 636 bridge (2-NBB001.54 and previously called PL-43C).

In addition, during the year 2002 cycle, an UT to Nibbs Creek was considered impaired of the Recreation Use goal. The segment continues to be impaired: Fecal coliform 8/8 at the Rt. 609 bridge (2-XQK000.15 and previously called PL-43B). The TMDL for this segment is due in 2014.

IMPAIRMENT SOURCE: PS - Municipal

It was suspected that the Amelia Courthouse STP, which discharges to Nibbs Creek, may have been a contributing source, however a new wastewater treatment plant was completed in 1994. It is suspected that the problems may also be caused by nonpoint source runoff in the watershed.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Amelia

STREAM NAME: Deep Creek

HYDROLOGIC UNIT: 02080207

TMDL ID: VAP-J11R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 7.41 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Spindlers Run

RIVER MILE: 9.1

LATITUDE: 37.24020 **LONGITUDE:** -77.94070

DOWNSTREAM LIMIT:

DESCRIPTION: Beaverpond Creek

RIVER MILE: 1.70

LATITUDE: 37.30340 **LONGITUDE:** -77.83390

Deep Creek from the confluence with Spindlers Run to the confluence of Beaverpond Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Deep Creek from Spindlers Run to the confluence with Beaverpond Creek was assessed as not supporting of the Recreation use support goal based on a fecal coliform standard violation rate of 6/27 recorded at 2-DPC005.20.

The segment was originally assessed as fully supporting but threatened during the 1998 cycle. During the year 2002 the segment was extended from the 1998 cycle, however the segment was returned to the original size in 2004 because of an acceptable monitoring rate at 2- DPC010.88.

IMPAIRMENT SOURCE: Unknown

The source of the fecal coliform standard violations is considered unknown.

Targeted monitoring is necessary to further delineate the affected segment and to characterize the causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Amelia, Nottoway

STREAM NAME: Deep Creek

HYDROLOGIC UNIT: 02080207

TMDL ID: VAP-J11R-02

ASSESSMENT CATEGORY: 5A, 5C

SEGMENT SIZE: 16.54 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 29.50

LATITUDE: 37.20450 **LONGITUDE:** -78.16490

DOWNSTREAM LIMIT:

DESCRIPTION: Cellar Creek

RIVER MILE: 12.80

LATITUDE: 37.24020 **LONGITUDE:** -77.94070

Deep Creek from its headwaters to the confluence with Cellar Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, Fecal Coliform

Deep Creek from its headwaters to the confluence with Cellar Creek was assessed as not supporting of the Aquatic Life use support goal based on a dissolved oxygen standard violation rate of 8/20 recorded at the Route 611 bridge (2-DPC019.03). The segment was extended during the 2002 cycle because of a dissolved oxygen violation rate of 1/1 at the Route 614 bridge (2-DPC017.07) in 1994.

During the year 2004 cycle, the segment was assessed as impaired of the Recreation use support goal based on a fecal coliform violation rate of 3/20 at 2-DPC019.03. The bacteria TMDL is not due until 2016.

IMPAIRMENT SOURCE: Natural Conditions, Unknown

The DO violations in this segment are attributed to natural conditions (swamps). Continued monitoring to increase the data set and make a confident assessment is recommended. Targeted monitoring and wetland delineation may be necessary to identify the limits of the segment affected by natural conditions. Such segments should be reclassified as wetlands where appropriate.

The source of the fecal coliform is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Amelia

STREAM NAME: West Creek

HYDROLOGIC UNIT: 02080207

TMDL ID: VAP-J11R-06

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 7.22 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Tanners Branch

RIVER MILE: 7.22

LATITUDE: 37.27170 **LONGITUDE:** -78.01040

DOWNSTREAM LIMIT:

DESCRIPTION: Deep Creek

RIVER MILE: 0.00

LATITUDE: 37.25690 **LONGITUDE:** -77.90750

West Creek from the confluence with Tanners Branch to the confluence with Deep Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The segment was assessed as Not Supporting the Recreation Use support goals based on a fecal coliform violation rate of 8/20 at station 2-WET004.96.

IMPAIRMENT SOURCE: Unknown

The source of the fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Amelia

STREAM NAME: Winticomack Creek

HYDROLOGIC UNIT: 02080207

TMDL ID: VAP-J12R-01

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 3.97 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Long Branch

RIVER MILE: 4.10

LATITUDE: 37.23840 **LONGITUDE:** -77.77170

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.26830 **LONGITUDE:** -77.74000

Winticomack Creek from Long Branch to its mouth at the Appomattox River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH

Winticomack Creek is assessed as not supporting the aquatic life use goals based on a dissolved oxygen violation rate of 11/32 and a pH violation rate of 13/31 at the Route 622 bridge (2-WTK001.50), a DO violation rate of 4/13 and a pH violation rate of 4/12 at the Route 708 bridge (2-WPK003.92) and the results of a 1994 special study.

IMPAIRMENT SOURCE: Natural Conditions

The source of the DO and pH violations in this watershed is attributed to natural conditions.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Amelia, Chesterfield, Dinwiddie

STREAM NAME: Winterpock Creek and tributaries

HYDROLOGIC UNIT: 02080207

TMDL ID: VAP-J12R-02

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 20.36 - Miles

INITIAL LISTING: 1994 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Winterpock Creek headwaters

RIVER MILE: 10.50

LATITUDE: 37.31210 **LONGITUDE:** -77.76050

DOWNSTREAM LIMIT:

DESCRIPTION: Appomattox River confluence

RIVER MILE: 0.00

LATITUDE: 37.29250 **LONGITUDE:** -77.67170

Segment consists of the entire Winterpock Creek mainstem and its tributaries, excluding Surline Branch and its tributaries.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH

The mainstem of Winterpock Creek was initially included on the 303(d) list in 1994 based on excessive DO and pH standard violations. This cycle Winterpock Creek was assessed not supporting of the Aquatic Life use support goal based on a DO standard violation rate of 14/46 and a pH standard violation rate of 13/46 recorded at the Route 602 bridge (2-WPK003.23). The violations were confirmed in a DEQ special study performed in 1994 and during pre-TMDL monitoring at multiple stations in the watershed during the year 2004 cycle. The TMDL is due in 2010.

The segment was extended in the year 2002 cycle to include tributaries because of a special study performed by the Richmond Regional PDC in 1997-1998. These impairments were confirmed during the pre-TMDL monitoring. The TMDL for the tributaries is due in 2014.

IMPAIRMENT SOURCE: Natural Conditions

The impairment of this stream segment is attributed to organic enrichment at the monitoring station. A pool at the monitoring station is always backwatered without velocity. However, this backwater is not from Lake Chesdin, as there is a 30-40 foot elevation difference between this location and the Lake Chesdin dam spillway. The source of organic enrichment is suspected to be forest decay product. Winterpock Creek is not considered representative of other tributaries of Lake Chesdin.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY:

STREAM NAME: Winterpock Creek

HYDROLOGIC UNIT: 02080207

TMDL ID: VAP-J12R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 9.97 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Winterpock Creek headwaters

RIVER MILE: 10.50

LATITUDE: 37.31210 **LONGITUDE:** -77.76050

DOWNSTREAM LIMIT:

DESCRIPTION: Appomattox River confluence

RIVER MILE: 0.00

LATITUDE: 37.29250 **LONGITUDE:** -77.67170

Segment consists of the entire Winterpock Creek mainstem

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The mainstem of Winterpock Creek was assessed as not supporting the Recreation Use support goal based on a fecal coliform violation rate of 5/41 at the Route 602 bridge (2-WPK003.23).

IMPAIRMENT SOURCE: Unknown

The source of the impairment is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Amelia

STREAM NAME: UT to Winticomack Creek

HYDROLOGIC UNIT: 02080207

TMDL ID: VAP-J12R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.69 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 2.68

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth at Winticomack

RIVER MILE: 0.00

LATITUDE: **LONGITUDE:**

Mainstem from its headwaters to its mouth at Winticomack Creek

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH

The segment was assessed as not supporting of the Aquatic Life use support goal based on a dissolved oxygen and pH violation rate of 3/5 at the Route 708 bridge (2-XTZ000.89).

IMPAIRMENT SOURCE: Unknown

The source of the impairment is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Amelia

STREAM NAME: UT to Winticomack Creek

HYDROLOGIC UNIT: 02080207

TMDL ID: VAP-J12R-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.81 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 0.81

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth at Winticomack

RIVER MILE: 0.00

LATITUDE: **LONGITUDE:**

Mainstem from its headwaters to its mouth at Winticomack Creek

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

The segment was assessed as not supporting of the Aquatic Life use support goal based on a pH violation rate of 3/5 at the Route 606 bridge (2-XTY000.08).

IMPAIRMENT SOURCE: Unknown

The source of the impairment is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Amelia, Chesterfield, Dinwiddie

STREAM NAME: Lake Chesdin

HYDROLOGIC UNIT: 02080207

TMDL ID: VAP-J14L-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3196 - Acres

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Extent of backwater

RIVER MILE:

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Dam

RIVER MILE:

LATITUDE: **LONGITUDE:**

Lake Chesdin

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

Dissolved oxygen violations in bottom waters during stratification. The Trophic State Index (TSI) was acceptable in the deeper areas, but exceeded 60 in the shallow backwaters. Therefore the reservoir is impaired.

IMPAIRMENT SOURCE: Unknown

Source is unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesterfield, Colonial Heights, Hopewell, Petersburg, Prince George

STREAM NAME: Appomattox River

HYDROLOGIC UNIT: 02080207

TMDL ID: VAP-J15E-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.68 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Fall line at Route 1/301 bridge

RIVER MILE: 10.40

LATITUDE: 37.23660 **LONGITUDE:** -77.40420

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.32080 **LONGITUDE:** -77.27520

Entire estuarine Appomattox River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform, PCBs in fish tissue

The segment was assessed not supporting of the Recreation use support goal based on a fecal coliform violation rate of 7/56 at 2-APP001.53. The segment was initially listed in 1998, therefore the TMDL is due in 2010.

In addition, during the 2002 cycle the segment was initially listed as impaired of the fish consumption use because of PCBs in fish tissue in DEQ monitoring performed in 1997 and 2001. The PCB TMDL is due in 2014.

IMPAIRMENT SOURCE: NPS - Unknown

The sources of the fecal coliform standard violations is attributed to non-point source runoff.

The source of the PCBs is considered unknown. A Toxics Source Assessment is currently being performed for the estuarine James River to investigate the PCB source.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesterfield, Colonial Heights, Dinwiddie, Petersburg

STREAM NAME: Appomattox River

HYDROLOGIC UNIT: 02080207

TMDL ID: VAP-J15R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 7.44 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Lake Chesdin dam

RIVER MILE: 17.80

LATITUDE: 37.22010 **LONGITUDE:** -77.52520

DOWNSTREAM LIMIT:

DESCRIPTION: Fall line at Route 1/301 bridge

RIVER MILE: 10.40

LATITUDE: 37.23660 **LONGITUDE:** -77.40420

Appomattox River from the Lake Chesdin dam downstream to the fall line at the Route 1/301 bridge.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The segment was assessed not supporting of the Recreation use support goal based on a fecal coliform violation rate of 14/47 recorded at 2-APP012.79.

IMPAIRMENT SOURCE: Unknown, NPS - Agriculture

The source of the fecal coliform standard violations is currently being investigated and is believed to be the result of agricultural non-point source runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesterfield, Colonial Heights

STREAM NAME: Oldtown Creek

HYDROLOGIC UNIT: 02080207

TMDL ID: VAP-J15R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.57 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Big Branch

RIVER MILE:

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Fall line

RIVER MILE:

LATITUDE: **LONGITUDE:**

Oldtown Creek from the confluence with Big Branch downstream to its tidal limit.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

The segment was assessed not supporting of the Aquatic Life use support goal based on a dissolved oxygen violation rate of 5/9 recorded at 2-OTC001.54.

IMPAIRMENT SOURCE: Unknown

The source of the dissolved oxygen violations is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Petersburg, Prince George

STREAM NAME: Harrison Creek

HYDROLOGIC UNIT: 02080207

TMDL ID: VAP-J15R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.39 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 2.39

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth at Appomattox River

RIVER MILE: 0.00

LATITUDE: **LONGITUDE:**

The mainstem of Harrison Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The segment was assessed not supporting of the Recreation use support goal based on a fecal coliform violation rate of 2/3 at USGS station 02041758 and supported by a fecal coliform violation rate of 1/3 at 02041760.

IMPAIRMENT SOURCE: Unknown

The source of the fecal coliform violations is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesterfield, Petersburg

STREAM NAME: Poor Creek

HYDROLOGIC UNIT: 02080207

TMDL ID: VAP-J15R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.13 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 3.13

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth at Appomattox River

RIVER MILE: 0.00

LATITUDE: **LONGITUDE:**

The mainstem of Poor Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The segment was assessed not supporting of the Recreation use support goal based on a fecal coliform violation rate of 2/3 at USGS station 02041745.

IMPAIRMENT SOURCE: Unknown

The source of the fecal coliform violations is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesterfield

STREAM NAME: Swift Creek

HYDROLOGIC UNIT: 02080207

TMDL ID: VAP-J16R-01

ASSESSMENT CATEGORY: 5A, 5C

SEGMENT SIZE: 1.61 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Turkey Creek

RIVER MILE: 36.20

LATITUDE: 37.46430 **LONGITUDE:** -77.71480

DOWNSTREAM LIMIT:

DESCRIPTION: Swift Creek Reservoir

RIVER MILE: 34.50

LATITUDE: 37.44540 **LONGITUDE:** -77.69390

Swift Creek from Turkey Creek downstream to the normal pool of Swift Creek Reservoir.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: pH, Fecal Coliform

Swift Creek was initially listed in 1998 as partially supporting the Aquatic Life Use goal because of pH and dissolved oxygen violations. The segment was later listed of EPA's list of "Waters Identified to Virginia for Listing Consideration During Development of the Next List"; dissolved oxygen was listed as the parameter of concern. During the 2002 cycle, the segment continued to have pH violations, but the dissolved oxygen was acceptable and was delisted. In 2004, the pH violation rate at the Route 657 bridge (2-SFT036.00) was 6/20. The TMDL for pH is due in 2010.

In 1998 the segment was listed as fully supporting but threatened of the Recreation Use goal. During the 2002 cycle, the segment was downgraded to partially supporting. During the year 2004 cycle, the segment was assessed not supporting of the Recreation use goal based on a fecal coliform violation rate of 3/18 at the Route 657 bridge (2-SFT036.00). The fecal TMDL is due in 2014.

IMPAIRMENT SOURCE: Natural Conditions, Unknown

The pH violations recorded in this segment are attributed to upstream swamps and low flow conditions. Reclassification of the segment to wetlands is recommended. Continued monitoring is recommended to increase the data set and make a confident assessment. Targeted monitoring may be necessary to further delineate the extent of impairment and to characterize the causes and sources.

The origin of the fecal coliform violations is considered to be unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesterfield

STREAM NAME: Blackman Creek

HYDROLOGIC UNIT: 02080207

TMDL ID: VAP-J16R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.45 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 4.45

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth at Deep Creek

RIVER MILE: 0.00

LATITUDE: **LONGITUDE:**

Mainstem from its headwaters to its mouth at the confluence of Deep Creek and Horsepen Creek

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH

The segment is considered impaired of the Aquatic Life Use based on a dissolved oxygen violation rate of 6/9 and a pH violation rate of 2/9 at the Route 668 bridge (2-BCM000.79).

In addition, phosphorus was listed as an observed effect in the segment.

IMPAIRMENT SOURCE: Unknown

The source of the DO and pH violations is considered unknown, however nutrient overenrichment may be a contributing factor.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesterfield

STREAM NAME: Swift Creek

HYDROLOGIC UNIT: 02080207

TMDL ID: VAP-J17R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 7.09 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Swift Creek Lake dam

RIVER MILE: 21.00

LATITUDE: 37.38440 **LONGITUDE:** -77.54170

DOWNSTREAM LIMIT:

DESCRIPTION: Licking Creek

RIVER MILE: 14.4

LATITUDE: 37.32630 **LONGITUDE:** -77.51000

Swift Creek from the Swift Creek Lake dam downstream to its confluence with Licking Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

In 1998, Swift Creek was assessed as threatened of the Aquatic Life Use due to dissolved oxygen violations.

In 2002, the segment was considered partially supporting of the Aquatic Life use support goal based on water quality monitoring performed at the Route 655 bridge (2-SFT019.15).

During the year 2004 cycle, the segment continued to show dissolved oxygen problems with a violation rate of 3/22.

IMPAIRMENT SOURCE: Impoundment

The source of the DO is suspected to be low flows released from dams in the summer and fall.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesterfield, Colonial Heights

STREAM NAME: Swift Creek

HYDROLOGIC UNIT: 02080207

TMDL ID: VAP-J17R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Lakeview Reservoir Dam

RIVER MILE: 5.90

LATITUDE: 37.27140 **LONGITUDE:** -77.41900

DOWNSTREAM LIMIT:

DESCRIPTION: Timsbury Creek

RIVER MILE: 1.9

LATITUDE: 37.28670 **LONGITUDE:** -77.39110

Swift Creek from the Lakeview Reservoir Dam downstream to the confluence with Timsbury Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Swift Creek was assessed not supporting of the Recreation use support goal based on water quality monitoring performed at monitoring station 2-SFT004.92. The fecal coliform standard violation rate was 6/19 during the 2004 cycle.

IMPAIRMENT SOURCE: Unknown

The source of the fecal coliform standard violations is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: James City

STREAM NAME: Powhatan Creek

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G10E-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.26 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the Rt 31 bridge

RIVER MILE: 3.38

LATITUDE: 37.23333 **LONGITUDE:** -76.76667

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the confluence with Sandy Bay

RIVER MILE: 0.00

LATITUDE: 37.21667 **LONGITUDE:** -76.76667

Segment begins at the Route 31 Bridge crossing Powhatan Creek extends to confluence with Sandy Bay.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform & Enterococci (2004)

Sufficient exceedances of Virginia's water quality standard for Fecal Coliform Bacteria & Enterococci (2004) were recorded at DEQ's ambient water quality monitoring station on Powhatan Creek (2-POW000.60) to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2002 305(b) report.

The cause of the Fecal Coliform & Enterococci (2004) Bacteria standard violation is the presence of enteric bacteria.

IMPAIRMENT SOURCE: Unknown

The Powhatan Creek monitoring station is located at the Colonial National Historical Parkway bridge over the creek, in James City County. The watershed potentially receives inputs from marinas, residential sewage treatment systems, wetlands areas, and storm water runoff associated with the surrounding residential area. This watershed is ranked high priority for potential NPS pollution by DCR. The specific source of the enteric bacteria causing the Fecal Coliform Bacteria standard violations is currently unknown.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: James City

STREAM NAME: Mill Creek

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G10E-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.08 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the end of tidal influence.

RIVER MILE: 5.00

LATITUDE: 37.23160 **LONGITUDE:** -76.74480

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the confluence with James River at The Thoroughfare.

RIVER MILE: 0.00

LATITUDE: 37.21480 **LONGITUDE:** -76.74490

Segment begins at end of tidal influence and extends to the confluence with James R.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform & Enterococci (2004)

Sufficient exceedances of Virginia's water quality standard for Fecal Coliform Bacteria and Enterococci (2004) were recorded at DEQ's ambient water quality monitoring station on Mill Creek (2-MIC000.03) to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2002 305(b) report.

The cause of the Fecal Coliform & Enterococci (2004) Bacteria standard violation is the presence of enteric bacteria.

IMPAIRMENT SOURCE: Unknown

The Mill Creek monitoring station is located at the Colonial National Historical Parkway bridge over the creek, in James City County. The watershed potentially receives inputs from wetlands areas, upstream residential areas, and storm water runoff associated with the surrounding area. This watershed is ranked high priority for potential NPS pollution by DCR. The specific source of the enteric bacteria causing the Fecal Coliform Bacteria standard violations is currently unknown.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Charles City, Hampton, Isle of Wight, James City, Newport News, Norfolk, Portsmouth, Prince Georg

STREAM NAME: James River (mainstem)

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G10E-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 128.33 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: All estuarine mainstem waters from start of G10E (Surry Co./Charles City Co. boundary junction).

RIVER MILE: 53.5

LATITUDE: 37.22330 **LONGITUDE:** -76.88390

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at downstream terminus of mainstem segment G15E (line across mouth of James R. at

RIVER MILE: 0.00

LATITUDE: 37.15380 **LONGITUDE:** -76.64190

All estuarine mainstem waters from start of G10E (Surry Co./Charles City Co. line) to end of G11E.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: EPA Overlisting (General Standards)

EPA 1998 303d OVERLISTING is the basis to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report.

The cause of the nutrient designation is unknown.

DEQ's addition of turbidity as an impairment cause is based on the best scientific information available since the EPA overlisted this segment in 1999 for nonattainment of aquatic life use due to nutrients.

IMPAIRMENT SOURCE: Unknown

EPA OVERLISTING on 1998 303d. The source of the reduced benthic diversity exhibited in the BIBI rating is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Charles City, Isle of Wight, James City, Newport News, Prince George, Surry

STREAM NAME: James River (Jamestown area)

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G10E-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 20.68 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins start G10E (Surry Co./Charles City Co. boundary junction) confluence Chippokes Cr

RIVER MILE: 53.5

LATITUDE: 37.22309 **LONGITUDE:** -76.88366

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at start G11E, confluence Skiffes Cr

RIVER MILE: 36.0

LATITUDE: 37.15374 **LONGITUDE:** -76.64185

Segment begins start G10E, confluence Chippokes Cr, extends downstream to start G11E, confluence Skiffes Cr.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

Benthic BIBI probabilistic station surveys (VERSAR 2002) in the CBP segment JMSOHa are the basis to assess this segment as impaired of the Clean Water Act's Aquatic Life Use Support Goal for the 2004 305(b) report.

The cause of the lower benthic diversity designation is unknown.

IMPAIRMENT SOURCE: Unknown

The specific source of the low benthic diversity is currently unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Charles City, Chesterfield, Henrico, Hopewell, James City, Prince George, Surry

STREAM NAME: Upper James River

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G10E-10

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 2.82 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 4.45

LATITUDE: 37.16667 **LONGITUDE:** -76.66667

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.16667 **LONGITUDE:** -76.75000

VDH-DSS shellfish harvesting condemnation number #69A, Upper James River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 1998 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Surry

STREAM NAME: College Run

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G10R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.35 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the confluence of College Run with Mill Farm Run.

RIVER MILE: 2.35

LATITUDE: 37.11730 **LONGITUDE:** -76.82150

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the confluence with James River, downstream 1.41 mi. from Rt. 634 crossing.

RIVER MILE: 0.00

LATITUDE: 37.14500 **LONGITUDE:** -76.73320

Segment begins at the confluence of College Run with Mill Farm Run and extends downstream to the confluence with the James River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Sufficient exceedances of Virginia's water quality standard for Fecal Coliform Bacteria were recorded at the monitoring station to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2002 305(b) report. The cause of the standard exceedances is unknown.

IMPAIRMENT SOURCE: Unknown

The source of the impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: James City

STREAM NAME: Powhatan Creek

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G10R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.1 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the confluence with Long Hill Swamp.

RIVER MILE: 3.10

LATITUDE: 37.31100 **LONGITUDE:** -76.76590

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the estuarine/riverine transition @ Rt 613.

RIVER MILE: 0.00

LATITUDE: 37.26030 **LONGITUDE:** -76.78370

Segment extends from the confluence with Long Hill Swamp downstream to the estuarine/riverine transition.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic), Fecal Coliform

Benthic biological monitoring at station 2-POW006.77 (located at State Route 613) indicated the stream's benthic community is moderately impaired. As a result, DEQ's General Standard (VR680-21-01.2) is not met for the protection of benthic aquatic life and this segment is assessed as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. Sufficient exceedances of Virginia's water quality standard for Fecal Coliform Bacteria and Enterococci (2004) were recorded at the monitoring station to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2004 305(b) report. The cause of the standard exceedances is unknown.

IMPAIRMENT SOURCE: Unknown, Unknown

The source of the impairments is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Isle of Wight, Newport News, Suffolk, Surry

STREAM NAME: James River (Mulberry Island area)

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G11E-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 95.28 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins start G11E (James City/Isle of Wight junction),confluence Skiffes Cr.

RIVER MILE: 36.0

LATITUDE: 37.15374 **LONGITUDE:** -76.64185

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at start G15E, @ Nansemond River confluence.

RIVER MILE: 9.0

LATITUDE: 36.93390 **LONGITUDE:** -76.42980

Segment begins start G11E (James City/Isle of Wight junction),confluence Skiffes Creek and ends at start G15E, @ Nansemond River confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

Benthic BIBI probabilistic station surveys (VERSAR 2002) in the CBP segment JMSMHa are the basis to assess this segment as impaired of the Clean Water Act's Aquatic Life Use Support Goal for the 2004 305(b) report.

The cause of the lower benthic diversity designation is unknown.

IMPAIRMENT SOURCE: Unknown

The specific source of the low benthic diversity is currently unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: James City, Newport News

STREAM NAME: Skiffes Creek tributary to James River

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G11E-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.41 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins 3.9 miles upstream of the monitoring station (2-SFF000.17) at Skiffes Cr Reservior da

RIVER MILE: 4.08

LATITUDE: 37.19838 **LONGITUDE:** -76.58452

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at mouth, confluence with James River

RIVER MILE: 0.00

LATITUDE: 37.16688 **LONGITUDE:** -76.61209

Segment begins at Skiffes Creek Reservior (RM 4.08) and extends downstream to mouth (confluence with James River)

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Fish Tissue - PCBs

Exceedance of fish tissue screening value for PCBs in fish samples (Shad, Croaker White Perch, Spot) collected in 2001 at station (2-SFF000.17) to assess this segment as not supporting of the Clean Water Act's Fish Consumption Use Support Goal for the 2004 305(b) report. The cause of the elevated fish tissue levels of PCBs is unknown.

IMPAIRMENT SOURCE: Unknown

The monitoring station (2-SFF000.17) is located north of the US Army Fort Eustis Military Reserve and South of a closed BASF plant. The land use in the watershed is primarily wetlands & low density residential. The watershed potentially receives inputs from wetlands areas and storm water runoff. The specific source of the elevated fish tissue PCBs concentration is currently unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Newport News

STREAM NAME: Deep Creek

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G11E-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.11 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the Warwick Yacht Club.

RIVER MILE: 0.76

LATITUDE: 37.08333 **LONGITUDE:** -76.52272

DOWNSTREAM LIMIT:

DESCRIPTION: Segment extends to the confluence with the Warwick River.

RIVER MILE: 0.00

LATITUDE: 37.08139 **LONGITUDE:** -76.52597

Segment begins at the Warwick Yacht Club and extends downstream to the confluence with the Warwick R

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Sufficient exceedances of Virginia's water quality standard for Fecal Coliform Bacteria were recorded at the monitoring station on Deep Creek (2-DEP000.26) to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2002 305(b) report. The cause of the Fecal Coliform Bacteria standard violation is the presence of enteric bacteria.

IMPAIRMENT SOURCE: Unknown

The Deep Creek monitoring station (2-DEP000.26) is located in the City of Newport News. The land use in the watershed is primarily residential. The watershed potentially receives inputs from wetlands areas, residential sewage treatment systems, and storm water runoff associated with the surrounding residential area/urban area.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Isle of Wight

STREAM NAME: Pagan River (Middle)

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G11E-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.3 - Sq. Mi.

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at Rt 258 & 10 junction southside Smithfield.

RIVER MILE: 4.90

LATITUDE: 37.01667 **LONGITUDE:** -76.66667

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends downstream of Town of Smithfield at Red Point.

RIVER MILE: 4.00

LATITUDE: 36.96667 **LONGITUDE:** -76.61667

Segment begins at Rt 258 & 10 junction southside Smithfield downstream to Red Point.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Sufficient exceedances of the standard for Fecal Coliform bacteria At station on the Pagan River (2-PGN004.57) to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2002 305(b) report. The cause of the Fecal Coliform Bacteria standard violation is the presence of enteric bacteria.

IMPAIRMENT SOURCE: Unknown

The major historical source of Fecal Coliform bacteria into the Pagan River is believed to have been caused by the discharge of effluent from the Smithfield Foods WWTP in violation of VPDES permitted effluent limitations (outfall 001). The facility connected to central sewerage and ceased its discharge to the Pagan River July 1997. The watershed potentially receives inputs from residential sewage treatment systems, wetlands areas, and storm water runoff associated with the surrounding residential /agricultural area. This watershed is ranked high priority for potential NPS pollution by DCR. The specific source of the FC bacteria is currently unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Isle of Wight

STREAM NAME: Pagan River (Upper)

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G11E-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.75 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at end of tidal.

RIVER MILE: 9.25

LATITUDE: 37.01667 **LONGITUDE:** -76.66667

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends adjacent to intersection Rt 258 & Rt 10 southside Town of Smithfield

RIVER MILE: 4.90

LATITUDE: 36.96667 **LONGITUDE:** -76.61667

Segment begins at end of tidal waters downstream to RM 5.03 (junction Rt 258 & 10 southside Smithfield).

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting, Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform, Dissolved Oxygen, Fish Tissue - PCBs

Sufficient exceedances of Virginia's water quality standard for Fecal Coliform Bacteria were recorded at four monitoring stations on the Pagan River (2-PGN008.42, 2-PGN007.44, 2-PGN006.65, and 2-PGN005.46) to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2002 305(b) report. Sufficient exceedances of Virginia's water quality standard for Dissolved Oxygen were recorded at the above monitoring station is the basis to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report.The cause of the Fecal Coliform Bacteria standard violation is the presence of enteric bacteria. The cause of the dissolved oxygen criteria violation is unknown.Exceedance of criteria based fish tissue value for PCBs in fish samples (Gizzard Shad, Spot) collected in 2002 at station (2-PGN006.03) to assess this segment as not supporting of the Clean Water Act's Fish Consumption Use Support Goal for the 2004 305(b) report. The cause of the elevated fish tissue levels of PCBs is unknown.

IMPAIRMENT SOURCE: Unknown, Unknown, Unknown

The major historical source of Fecal Coliform bacteria into the Pagan River is believed to have been caused by the discharge of effluent from the Smithfield Foods WWTP in violation of VPDES permitted Fecal Coliform effluent limitations (outfall 001). The facility connected to central sewerage and ceased its discharge to the Pagan River July 1997. The watershed potentially receives inputs from residential sewage treatment systems, wetlands areas, and storm water runoff associated with the surrounding residential /agricultural area. This watershed is ranked high priority for potential NPS pollution by DCR. The specific source of the enteric bacteria causing the Fecal Coliform Bacteria and dissolved oxygen standard violations is currently unknown. The cause of the elevated fish tissue levels of PCBs is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Isle of Wight

STREAM NAME: Jones Creek tributary to Pagan River

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G11E-06

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.32 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins 4.6 miles upstream from the monitoring station (2-JOG000.62) at the headwaters

RIVER MILE: 5.17

LATITUDE: 36.94714 **LONGITUDE:** -76.58070

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at mouth, confluence with Pagan River

RIVER MILE: 0.00

LATITUDE: 36.99936 **LONGITUDE:** -76.57014

Segment begins 4.6 miles upstream of monitoring station @ RM 5.17 and extends downstream to the mouth (confluence with the Pagan River).

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Fish Tissue - PCBs

Exceedance of fish tissue screening value for PCBs in fish samples (Shad, Croaker) collected in 2001 at station (2-JOG000.62) to assess this segment as not supporting of the Clean Water Act's Fish Consumption Use Support Goal for the 2004 305(b) report. The cause of the elevated fish tissue levels of PCBs is unknown.

IMPAIRMENT SOURCE: Unknown

The monitoring station (2-JOG000.62) is located in Jones Creek, a tributary to Pagan River. The land use in the watershed is primarily wetlands & low density residential. The watershed potentially receives inputs from wetlands areas and storm water runoff. The specific source of the elevated fish tissue PCBs concentration is currently unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Isle of Wight, Suffolk

STREAM NAME: Chuckatuck Creek tributary to James River

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G11E-07

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.94 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins 1.9 miles upstream from the monitoring station (2-CKT003.05) at the end of tidal waters

RIVER MILE: 6.94

LATITUDE: 36.86706 **LONGITUDE:** -76.56821

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at mouth, confluence with James River

RIVER MILE: 0.00

LATITUDE: 36.92380 **LONGITUDE:** -76.49440

Segment begins 1.9 miles upstream of monitoring station at end of tidal waters and extends downstream to the mouth (confluence with the James River).

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Fish Tissue - PCBs

Exceedance of fish tissue screening value for PCBs in fish samples (Shad, Spot) collected in 2001 at station (2-CKT003.05) to assess this segment as not supporting of the Clean Water Act's Fish Consumption Use Support Goal for the 2004 305(b) report. The cause of the elevated fish tissue levels of PCBs is unknown.

IMPAIRMENT SOURCE: Unknown

The monitoring station (2-CKT003.05) is located in the Chuckatuck Creek. The land use in the watershed is primarily wetlands & low density residential. The watershed potentially receives inputs from wetlands areas and storm water runoff. The specific source of the elevated fish tissue PCBs concentration is currently unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Newport News

STREAM NAME: Warwick River (Upper)

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G11E-08

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.21 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at end of tidal waters.

RIVER MILE: 10.88

LATITUDE: 37.17210 **LONGITUDE:** -76.56470

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the confluence with Lukas Creek.

RIVER MILE: 3.48

LATITUDE: 37.11420 **LONGITUDE:** -76.56530

Segment begins at end of tidal waters downstream to confluence with Lukas Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Sufficient exceedances of Virginia's water quality standard for Fecal Coliform Bacteria was recorded (2-WWK003.98) to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2002 305(b) report. The monitoring station is effected by the ebb and flood tidal cycles associated with estuarine systems.

The cause of the Fecal Coliform Bacteria standard violation is the presence of enteric bacteria.

IMPAIRMENT SOURCE: Unknown

The Warwick River monitoring station (2-WWK003.98) is located at the end of Rt 173 (Denbigh Blvd.) in the City of Newport News. The land use in the watershed is primarily residential. The watershed potentially receives inputs from wetlands areas, residential sewage treatment systems, and storm water runoff associated with the surrounding residential area/urban area. The specific source of the elevated Fecal Coliform bacteria concentration is currently unknown.

Additional monitoring is necessary.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Isle of Wight, Newport News

STREAM NAME: James River

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G11E-09

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.5 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the one-half mile upstream of station

RIVER MILE: 17.51

LATITUDE: 37.02170 **LONGITUDE:** -76.53370

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends one-half mile downstream station

RIVER MILE: 16.51

LATITUDE: 37.01650 **LONGITUDE:** -76.52660

Segment begins 0.5 mile upstream of monitoring station and extends 0.5 mile downstream.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Fish Tissue - PCBs

Sufficient exceedance of fish tissue screening value for PCBs (1996 & 1994 by DEQ) @ station 2-JMS017.01 to assess this segment as not supporting of the Clean Water Act's Fish Consumption Use Support Goal for the 2002 305(b) report.

The cause of the elevated fish tissue levels of PCBs are unknown.

IMPAIRMENT SOURCE: Unknown

The James River monitoring station for fish tissue (2-JMS017.01) is located in the Mulberry Island area on the border between Isle of Wight County and City of Newport News. The land use in the watershed is mixed agricultural, forested, and light residential. The watershed potentially receives inputs from storm water runoff associated with the surrounding forested / agricultural / residential area. The specific source of the elevated toxic organic compounds concentration is currently unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Isle of Wight

STREAM NAME: Pagan River and Jones Creek

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G11E-10

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 2.63 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 6

LATITUDE: 36.98333 **LONGITUDE:** -76.65000

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.00833 **LONGITUDE:** -76.56667

VDH-DSS shellfish harvesting condemnation # 64, Pagan River and Jones Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: James City

STREAM NAME: James River - Grove Creek Area

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G11E-11

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 1.85 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 1.10

LATITUDE: 37.16667 **LONGITUDE:** -76.66667

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.16667 **LONGITUDE:** -76.75000

VDH-DSS shellfish harvesting condemnation #67-Upper James River-Grove Cr

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 1998 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: James City, Newport News

STREAM NAME: James River - Opposite Fort Eustis & Skiffes Cree

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G11E-12

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 1.76 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 4.1

LATITUDE: 37.19167 **LONGITUDE:** -76.62917

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.12917 **LONGITUDE:** -76.63333

VDH-DSS shellfish harvesting condemnation # 23, located in James River - Opposite Fort Eustis.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 1998 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Newport News

STREAM NAME: James River: Swash Hole

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G11E-13

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.1 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 1.4

LATITUDE: 37.10278 **LONGITUDE:** -76.60556

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.12500 **LONGITUDE:** -76.60000

VDH-DSS shellfish harvesting condemnation # 183, located in James River - Swash Hole.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Isle of Wight, Surry

STREAM NAME: Upper James River: Lawnes Cr

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G11E-14

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.27 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 1.75

LATITUDE: 37.16667 **LONGITUDE:** -76.66667

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.16667 **LONGITUDE:** -76.75000

VDH-DSS shellfish harvesting condemnation #69B-Upper James River-Lawnes Cr

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 1998 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Newport News

STREAM NAME: Warwick and James Rivers

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G11E-15

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 3.07 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 6.6

LATITUDE: 37.00417 **LONGITUDE:** -76.46667

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.11667 **LONGITUDE:** -76.56667

VDH-DSS shellfish harvesting condemnation #34, located in Warwick and James Rivers.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Isle of Wight, Suffolk

STREAM NAME: Chuckatuck Creek

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G11E-16

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.61 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 2.3

LATITUDE: 36.90833 **LONGITUDE:** -76.51250

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 36.87500 **LONGITUDE:** -76.56250

VDH-DSS shellfish harvesting condemnation number 80B, located in Chuckatuck Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Isle of Wight

STREAM NAME: Kings and Ballard Marsh Creeks

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G11E-17

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.07 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 3

LATITUDE: 36.97500 **LONGITUDE:** -76.52500

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 36.96667 **LONGITUDE:** -76.53333

VDH-DSS shellfish harvesting condemnation # 164, located in Kings and Ballard Marsh Creeks.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Isle of Wight

STREAM NAME: Tylers Beach Boat Basin

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G11E-18

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.001 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.50

LATITUDE: 37.08220 **LONGITUDE:** -76.66550

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.08230 **LONGITUDE:** -76.66540

VDH-DSS shellfish harvesting condemnation # 206, Tylers Beach Boat Basin

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Isle of Wight

STREAM NAME: Ragged Island Creek

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G11E-19

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.32 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 2.00

LATITUDE: 36.94944 **LONGITUDE:** -76.51056

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 36.93667 **LONGITUDE:** -76.49444

VDH-DSS shellfish harvesting condemnation # 80A Ragged Island Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Newport News

STREAM NAME: Lee Hall (City Reservoir - West portion)

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G11L-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 30 - Acres

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the northern C&O RR crossing.

RIVER MILE: 0.85

LATITUDE: 36.16915 **LONGITUDE:** -76.55005

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at I-64 crossing of southwest portion of reservoir near Jones Run.

RIVER MILE: 0.00

LATITUDE: 37.18838 **LONGITUDE:** -76.53099

Segment begins at the northern C&O RR crossing of the northwest portion and ends at the I-64 crossing of southwest portion of reservoir near Jones Run.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Aquatic Life Use - Not Supporting, Wildlife Use - Not Supporting

IMPAIRMENT CAUSE: Copper, Dissolved Oxygen, Copper

Sufficient exceedances of the standard for Dissolved Oxygen and dissolved copper (acute criteria) at USGS stations in south portion of reservoir (204279230 & 204279240) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2004 305(b) report. Sufficient exceedances of the standard for dissolved copper (acute criteria) to assess this segment as not supporting of the Clean Water Act's Wildlife Use Support Goal for the 2004 305(b) report. The cause of the dissolved oxygen standard violation is unknown. The cause of the dissolved copper standard (acute) exceedances is believed due to the addition of copper biocides for algal control.

IMPAIRMENT SOURCE: Cu addition as algaecide, Unknown, Cu addition as algaecide

The source of the dissolved oxygen impairment is unknown. The source of the acute copper exceedances is suspected to be caused by the addition of copper biocides to prevent algicide excessive growth.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Newport News, York

STREAM NAME: Lee Hall (City Reservoir - East portion)

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G11L-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 200 - Acres

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins on the eastern side of the northern C&O RR crossing of the western lobe of the reservo

RIVER MILE: 0.95

LATITUDE: 37.17827 **LONGITUDE:** -76.56132

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the northeastern end of the reservoir, at the confluence with Beaverdam Creek.

RIVER MILE: 0.00

LATITUDE: 36.16915 **LONGITUDE:** -76.55005

Segment begins on the eastern side of the northern C&O RR crossing of the western lobe of the reservoir and ends at the northeastern end of the reservoir, at the confluence with Beaverdam Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Wildlife Use - Not Supporting

IMPAIRMENT CAUSE: Copper, Copper

Sufficient exceedances of the standard for dissolved copper (acute criteria) at USGS station (204279210) in the eastern portion of this reservoir to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2004 305(b) report. Sufficient exceedances of the standard for dissolved copper (acute criteria) to assess this segment as also not supporting of the Clean Water Act's Wildlife Use Support Goal for the 2004 305(b) report. The cause of the dissolved copper standard (acute) exceedances is believed due to the addition of copper biocides for algal control.

IMPAIRMENT SOURCE: Cu addition as algaecide, Cu addition as algaecide

The source of the acute copper exceedances is suspected to be caused by the addition of copper biocides to prevent algicide excessive growth.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: York

STREAM NAME: Baptist Run

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G11R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.7 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at outflow of pond upstream of station at Crawford Drive.

RIVER MILE: 1.70

LATITUDE: 37.21390 **LONGITUDE:** -76.54680

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the confluence of Baptist Run with Great Run and Beaverdam Cr.

RIVER MILE: 0.00

LATITUDE: 37.21010 **LONGITUDE:** -76.51835

Segment begins at outflow of pond upstream of station at Crawford Drive extending downstream to confluence with Great Run and Beaverdam Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Sufficient exceedances of Virginia's water quality standard for Fecal Coliform Bacteria were recorded at the monitoring station (2-BAP000.80 2/2) to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2004 305(b) report. The cause of the standard exceedances is unknown.

IMPAIRMENT SOURCE: Unknown

The source of the impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Isle of Wight

STREAM NAME: Chuckatuck Creek

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G11R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.44 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the confluence of the unnamed tributary downstream of Rt 600.

RIVER MILE: 6.96

LATITUDE: 36.88860 **LONGITUDE:** -76.62660

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at confluence of unnamed triburary downstream of Rt 602 (0.2 mi downstream of BIO sta

RIVER MILE: 5.52

LATITUDE: 36.88050 **LONGITUDE:** -76.60690

Segment begins at the confluence of the unnamed tributary downstream of Rt 600 and ends at confluence of unnamed triburary downstream of Rt 602 (0.2 mi downstream of BIO station @ 2-CKT005.72)

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

Benthic biological monitoring at station 2-CKT005.72 indicated the stream's benthic community is moderately impaired. As a result, DEQ's General Standard (VR680-21-01.2) is not met for the protection of benthic aquatic life and this segment is assessed as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2004 305(b) report. The cause of the stream's benthic community impairment is unknown.

IMPAIRMENT SOURCE: Unknown

The source of the impairments is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Isle of Wight

STREAM NAME: Pagan River at Wrenns Millpond

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G11R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.9 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at outflow of Wrenns Millpond.

RIVER MILE: 10.1

LATITUDE: 37.01667 **LONGITUDE:** -76.66667

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends RM 9.25 @ confluence Lawson Cr.

RIVER MILE: 9.25

LATITUDE: 36.00929 **LONGITUDE:** -76.66140

Segment begins at outflow of Wrenns Millpond extending downstream to RM 9.25 at the confluence with Lawson Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Sufficient exceedances of Virginia's water quality standard for Fecal Coliform Bacteria (2004) were recorded at station located at the outflow of Wrenns Pond (2-PGN010.07) to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2004 305(b) report.The cause of the Fecal Coliform Bacteria standard violation is the presence of enteric bacteria.

IMPAIRMENT SOURCE: Unknown

The monitoring station is located downstream of the outflow of Wrenns Pond (2-PGN010.07).This watershed is ranked high priority for potential NPS pollution by DCR. The specific source of the enteric bacteria causing the Fecal Coliform Bacteria standard violations is currently unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Isle of Wight, Suffolk

STREAM NAME: Eley Swamp

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G12R-01

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 4.4 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins 2.40 mi. upstream of monitoring station (2-ELE003.40) at Rt 607 crossing.

RIVER MILE: 5.80

LATITUDE: 36.78190 **LONGITUDE:** -76.72340

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends downstream 2.00 mi. from Rt. 607 crossing.

RIVER MILE: 1.40

LATITUDE: 36.77140 **LONGITUDE:** -76.66260

Segment begins 2.40 mi. upstream of monitoring station (2-ELE003.40) at Rt 607 crossing and ends 2.00 mi. downstream from Rt. 607 crossing.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

Sufficient exceedances of Virginia's water quality standard for pH was recorded at water quality monitoring stations on Eley Swamp (2-ELE003.40) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 1998 305(b) report. All data was collected between 1993 - 1996. The segment is retained for the 2002 & 2004 305(b) reports lacking more recent data to alter the 1998 assessment of impairment. The cause of the standard violation is attributed to naturally occurring conditions.

IMPAIRMENT SOURCE: Natural Conditions

The source of the impairment is attributed to naturally occurring conditions.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Suffolk

STREAM NAME: Nansemond River (Upper)

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G13E-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.25 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the Rt 58 crossing

RIVER MILE: 15.5

LATITUDE: 36.76420 **LONGITUDE:** -76.56130

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the confluence with Western Branch Reservoir

RIVER MILE: 12.25

LATITUDE: 36.78907 **LONGITUDE:** -76.56262

Segment begins at the Rt 58 crossing downstream to confluence with Western Branch.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Sufficient exceedances of Virginia's water quality standard for Fecal Coliform Bacteria were recorded at a station on the Nansemond R. (02-NAN013.50) to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2004 305(b) report. The cause of the Fecal Coliform Bacteria standard violation is the presence of enteric bacteria.

IMPAIRMENT SOURCE: Unknown

The Nansemond River monitoring station is located downstream of the Route 58/460 Bridge over the Nansemond River in the City of Suffolk. The watershed receives inputs from storm water runoff associated with the surrounding residential /urban area.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Suffolk

STREAM NAME: Nansemond River (Lake Meade Dam)

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G13E-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.32 - Sq. Mi.

INITIAL LISTING: 1994 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the Lake Meade Dam

RIVER MILE: 19.80

LATITUDE: 36.74740 **LONGITUDE:** -76.58900

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the confluence with Shingle Creek

RIVER MILE: 18.60

LATITUDE: 36.76420 **LONGITUDE:** -76.56130

Segment begins at the Lake Meade Dam and extends downstream to the Rt 58 crossing.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform & Enterococci (2004), Dissolved Oxygen

Sufficient exceedances of Virginia's water quality standard for Fecal Coliform Bacteria & Enterococci (2004) were recorded at a station on the Nansemond R. (02-NAN019.14) to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2002 305(b) report. The cause of the Fecal Coliform & Enterococci (2004) Bacteria standard violation is the presence of enteric bacteria. Sufficient exceedances of Virginia's water quality standard for Dissolved Oxygen were recorded at the above station to assess segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The cause of the low D.O. is unknown.

IMPAIRMENT SOURCE: Unknown, Unknown

The Nansemond River monitoring station is located at the Route 460 Bridge over the Nansemond River in the City of Suffolk. The Nansemond River BIBI monitoring stations are randomly located within the Nansemond River, in the City of Suffolk. The watershed receives inputs from storm water runoff associated with the surrounding residential /urban area. The specific source of the Fecal Coliform Bacteria & Enterococci bacteria and DO standard violations is currently unknown.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Suffolk

STREAM NAME: Bennet Creek (Lower)

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G13E-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.52 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at 0.5 mi upstream of Rt 17 crossing.

RIVER MILE: 1.92

LATITUDE: 36.85900 **LONGITUDE:** -76.48346

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at confluece with Nansemond River.

RIVER MILE: 0.00

LATITUDE: 36.87754 **LONGITUDE:** -76.48282

Segment begins at 0.5 mi upstream of Rt 17 crossing ends at confluece with Nansemond River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform, Fish Tissue - PCBs

Sufficient exceedances of Virginia's water quality standard for Fecal Coliform Bacteria were recorded at a station on the Nansemond R. (02-BEN001.42) to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2004 305(b) report. The cause of the Fecal Coliform Bacteria standard violation is the presence of enteric bacteria. Exceedance of criteria based fish tissue value for PCBs in fish samples (Gizzard Shad, Croaker) collected in 2002 at station (2-BEN001.42) to assess this segment as not supporting of the Clean Water Act's Fish Consumption Use Support Goal for the 2004 305(b) report. The cause of the elevated fish tissue levels of PCBs is unknown.

IMPAIRMENT SOURCE: Unknown, Unknown

The Bennett Creek monitoring station is located downstream of the Route 17 Bridge in the City of Suffolk.The watershed receives inputs from storm water runoff associated with the surrounding residential / wetlands area. The source of the elevated fish tissue levels of PCBs is unknown. The source of the elevated Fecal Coliform levels is unknown.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Suffolk

STREAM NAME: Star Creek tributary to Nansemond River

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G13E-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.02 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins one-half mile upstream of monitoring station @ RM 0.28 (confluence of UT).

RIVER MILE: 0.78

LATITUDE: 36.80876 **LONGITUDE:** -76.53922

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the mouth, confluence with Oyster House Creek.

RIVER MILE: 0.00

LATITUDE: 36.80933 **LONGITUDE:** -76.54756

Segment begins one-half mile upstream of monitoring station @ RM 0.28 (confluence of UT) and ends at the mouth, confluence with Oyster House Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Fish Tissue - PCBs

Sufficient exceedances of fish tissue screening value for PCBs in fish samples (Croaker, Shad, Mummichog, Turtle, Perch) collected in 2002 at station (2-STR000.28) to assess this segment as not supporting of the Clean Water Act's Fish Consumption Use Support Goal for the 2004 305(b) report. The cause of the elevated fish tissue levels of PCBs is unknown.

IMPAIRMENT SOURCE: Unknown

The Star Creek monitoring station (2-STR000.28) is located south of the Naval Transmitter site at Driver . The land use in the watershed is primarily wetlands & low density residential. The watershed potentially receives inputs from wetlands areas and storm water runoff. In proximity to the monitoring site is the Naval Transmitter site at Driver. The specific source of the elevated fish tissue PCBs concentration is currently unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Suffolk

STREAM NAME: Shingle Creek

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G13E-07

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.12 - Sq. Mi.

INITIAL LISTING: 1994 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the headwaters of Shingle Creek

RIVER MILE: 1.90

LATITUDE: 36.73280 **LONGITUDE:** -76.55530

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the confluence with Nansemond River

RIVER MILE: 0.00

LATITUDE: 36.74370 **LONGITUDE:** -76.57350

Segment begins at the headwaters of Shingle Cr. extends to confluence with Nansemond R.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform, Dissolved Oxygen, pH

Sufficient exceedances of standard for Fecal Coliform Bacteria recorded at station on Shingle Creek (2-SGL001.00, 2-SGL001.50) to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2002 305(b) report. Violation of standards for pH and dissolved oxygen recorded at above two station to assess this segment as not supporting and not supporting, respectively, of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. Cause of the Fecal Coliform Bacteria standard violation is the presence of enteric bacteria. Cause of the D.O. and pH standard exceedances may be due to naturally occurring conditions from waters flowing from the dismal swamp area.

IMPAIRMENT SOURCE: Unknown, Unknown, Unknown

The Shingle Creek monitoring station is located at the Route 642 (Wilroy Road) Bridge over Shingle Creek in the City of Suffolk. The watershed potentially receives inputs from residential sewage treatment systems and storm water runoff associated with the surrounding residential /urban area. The specific source of the enteric bacteria causing the Fecal Coliform Bacteria standard violations is currently unknown. Connection with canals in the dismal swamp area is suspected as the potential source of low D.O and pH measurements.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Suffolk

STREAM NAME: Nansemond River: Bleakhorn Creek

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G13E-10

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.05 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.8

LATITUDE: 36.90833 **LONGITUDE:** -76.47500

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 36.90833 **LONGITUDE:** -76.48333

VDH-DSS shellfish harvesting condemnation # 182, located in Nansemond River - Bleakhorn Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Suffolk

STREAM NAME: Nansemond River: Knotts Creek

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G13E-11

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.14 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 1.5

LATITUDE: 36.88333 **LONGITUDE:** -76.45556

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 36.85833 **LONGITUDE:** -76.45556

VDH-DSS shellfish harvesting condemnation # 77, located in Nansemond River: Knotts Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Suffolk

STREAM NAME: Nansemond River: Bennett Creek

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G13E-12

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.46 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 1.4

LATITUDE: 36.88333 **LONGITUDE:** -76.48333

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 36.85833 **LONGITUDE:** -76.48333

VDH-DSS shellfish harvesting condemnation #46, located in Nansemond River: Bennett Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 1998 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Suffolk

STREAM NAME: Nansemond River & tributaries

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G13E-13

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 3.28 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the Lake Meade Dam

RIVER MILE: 8.8

LATITUDE: 36.88333 **LONGITUDE:** -76.45556

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at a line from Nansemond Point to Sleepy Hole.

RIVER MILE: 0.00

LATITUDE: 36.85833 **LONGITUDE:** -76.45556

VDH-DSS shellfish harvesting condemnation # 8 Nansemond River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Suffolk

STREAM NAME: Shingle Creek

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G13E-14

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.12 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 3.0

LATITUDE: 36.88333 **LONGITUDE:** -76.45556

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 36.85833 **LONGITUDE:** -76.45556

VDH-DSS shellfish harvesting condemnation # 8 (portion of), Shingle Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Isle of Wight

STREAM NAME: Carbell Swamp (Upper)

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G14R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.57 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the headwaters.

RIVER MILE: 6.60

LATITUDE: 36.89100 **LONGITUDE:** -76.63580

DOWNSTREAM LIMIT:

DESCRIPTION: Segment extends to the start of unnamed pond.

RIVER MILE: 4.03

LATITUDE: 36.90833 **LONGITUDE:** -76.51250

Segment begins at the headwaters and extends to start of Unnamed pond.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH, General Standard (Benthic)

Sufficient exceedances of Virginia's water quality standard for pH was recorded at water quality monitoring station on Carbell Swamp (2-CRL004.04) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. Minimal data was collected 3/5 to assess. Benthic biological monitoring at station 2-CRL004.04 indicated the stream's benthic community is moderately impaired. As a result, DEQ's General Standard (VR680-21-01.2) is not met for the protection of benthic aquatic life and this segment is assessed as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2004 305(b) report. The cause of the General Standard exceedances is unknown. The cause of the pH standard violation is attributed to naturally occurring conditions.

IMPAIRMENT SOURCE: Natural Conditions, Unknown

The land use in the watershed is mixed agricultural, forested, and swamps. The watershed potentially receives inputs from wetlands areas, residential sewage treatment systems, and storm water runoff associated with the surrounding area. The source of the depressed pH concentration is believed to be natural conditions for a swamp.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesapeake, Portsmouth

STREAM NAME: Southern Br, Elizabeth R @ Paradise Creek

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G15E-01-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.85 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the Naval Ammunition Depot (RM 4.00).

RIVER MILE: 4.00

LATITUDE: 36.78850 **LONGITUDE:** -76.30420

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the Jordan Bridge [RM 2.30].

RIVER MILE: 2.30

LATITUDE: 36.80839 **LONGITUDE:** -76.29037

Segment begins at the Naval Ammunition Depot (RM 4.00) and ends at the Jordan Bridge [RM 2.30].

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

Sufficient exceedances of standard for dissolved oxygen were recorded at station (2-SBE006.26,) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The cause of the depressed dissolved oxygen concentrations is unknown.

IMPAIRMENT SOURCE: Unknown

The subject Southern Branch monitoring station is located near the confluence of Paradise Creek in Portsmouth. The land use in the watershed is primarily industrial shipping/shipbuilding with dense urban/residential. The watershed potentially receives inputs from storm water runoff associated with the surrounding residential area/urban area. The specific source of the depressed oxygen concentrations is currently unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesapeake, Norfolk, Portsmouth

STREAM NAME: Southern Branch, Elizabeth River

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G15E-01-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.15 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the Jordan Bridge.

RIVER MILE: 2.30

LATITUDE: 36.80833 **LONGITUDE:** -76.29029

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at mouth.

RIVER MILE: 0.00

LATITUDE: 36.84003 **LONGITUDE:** -76.29318

Segment begins at the Jordan Bridge and ends at mouth (confluence with mainstem Elizabeth River).

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Sufficient exceedances of Virginia's water quality standard for Fecal Coliform Bacteria were recorded at DEQ's ambient water quality monitoring station on the Southern Branch (2-SBE001.53 & 2-SBE002.30) to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2002 305(b) report. The cause of the Fecal Coliform Bacteria standard violation is the presence of enteric bacteria.

IMPAIRMENT SOURCE: Unknown

The subject Southern Branch monitoring stations are located near the Norfolk Naval Shipyard in Portsmouth. The land use in the watershed is primarily industrial shipping/shipbuilding with moderate urban/residential. The watershed potentially receives inputs from wetlands areas and storm water runoff associated with the surrounding residential area/urban area. The specific source of the elevated bacteria concentrations is currently unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesapeake, Norfolk, Portsmouth, Virginia Beach

STREAM NAME: Elizabeth River & All branches (mainstems)

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G15E-01-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 23.3 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at headwaters (of all branches).

RIVER MILE: 19.20

LATITUDE: 36.72391 **LONGITUDE:** -76.24927

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at downstream terminus of Elizabeth River, confluence with Hampton Roads Harbor.

RIVER MILE: 0.00

LATITUDE: 36.92480 **LONGITUDE:** -76.34169

Segment begins at headwaters (of all branches) and extends to the mouth of the Elizabeth R.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: EPA Overlisting (General Standards), General Standard (Benthic)

EPA 1998 303d OVERLISTING is the basis to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report.The cause of the nutrient designation is unknown.DEQ's addition of turbidity as an impairment cause is based on the best scientific information available since the EPA overlisted this segment in 1999 for nonattainment of aquatic life use due to nutrients. Benthic biological assessment (VERSAR 2002) of randomly located stations (segments SBEMHa, EBEMHa, WBEMHa, ELIPHa, & ELIMHa) indicated benthic community is moderately impaired. As a result, DEQ's General Standard (VR680-21-01.2) is not met for the protection of benthic aquatic life and this segment is assessed as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2004 305(b) report. The cause of the General Standard exceedances is unknown.

IMPAIRMENT SOURCE: Unknown, Unknown

Source of nutrient impairment is unknown. CBP B-IBI random station monitoring for B-IBI, source of impairment is unknown. The land use in the watershed is primarily industrial shipping/shipbuilding with moderate urban/residential. Extensive sediment contamination is present and frequent dredging occurrs.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesapeake, Norfolk, Portsmouth

STREAM NAME: Southern Branch, Elizabeth River

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G15E-01-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.74 - Sq. Mi.

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the I-64 crossing of the Southern Branch Elizabeth (near Deep Cr).

RIVER MILE: 6.50

LATITUDE: 36.75800 **LONGITUDE:** -76.29680

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the confluence with mainstem Elizabeth R.

RIVER MILE: 0.00

LATITUDE: 36.83900 **LONGITUDE:** -76.29310

Segment begins at the I-64 crossing downstream to confluence with mainstem Elizabeth R.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Tributyltin

Sufficient exceedances of Virginia's chronic water quality standard for Tributyltin (frequency of 100%) were recorded at DEQ's monitoring stations on the Southern Branch Elizabeth River (2-SBE006.26, 2-SBE004.61, 2-SBE002.88 and 02-SBE001.53) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report.

The cause of the Tributyltin standard exceedances is the presence of Tributyltin compounds in excess of the chronic standard (0.001ug/l) in 100% of observations.

IMPAIRMENT SOURCE: Commercial port activities

The Southern Branch Elizabeth River monitoring stations are located throughout the mainstem from the area of the I-64 crossing (Deep Creek confluence) to the mouth. This segment supports considerable commercial vessel traffic with tributyltin hull coatings. Ship repair facilities bordering this segment may service vessels with tributyltin hull coatings, per provisions contained in their VPDES permits.

The specific source of the tributyltin standard violations is believed to be commercial port activities.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesapeake

STREAM NAME: Deep Cr. tributary to Southern Branch Elizabeth Ri

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G15E-01-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.5 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Segment begins one-half mile upstream of monitoring station @ RM 1.04.

RIVER MILE: 1.04

LATITUDE: 36.75140 **LONGITUDE:** -76.33280

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the mouth, confluence with Southern Br. Elizabeth R.

RIVER MILE: 0.00

LATITUDE: 36.75710 **LONGITUDE:** -76.29860

Segment begins one-half mile upstream of monitoring station and extends to mouth.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Fish Tissue - PCBs

Exceedance of fish tissue screening value for PCBs in seven fish species collected in 1998 & 2000 at station (2-DEC000.54) to assess this segment as not supporting of the Clean Water Act's Fish Consumption Use Support Goal for the 2002 305(b) report. Cause of the elevated fish tissue levels of PCBs is unknown, but may be related to sediment PCB contamination at the same site. Cause of the sediment PCB contamination is also unknown.

IMPAIRMENT SOURCE: Unknown

The Deep Creek monitoring station (2-DEP000.54) is located near the confluence with the Southern Branch Elizabeth R. The land use in the watershed is primarily industrial shipping/shipbuilding with moderate urban/residential. The watershed potentially receives inputs from wetlands areas and storm water runoff associated with the surrounding residential area/urban area. In proximity to the monitoring site is a coal powered power plant (VPDES VA0004081: Chesapeake Energy Center) and roadway runoff. The specific source of the elevated sediment and fish tissue PCBs concentration is currently unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesapeake

STREAM NAME: Southern Br, Elizabeth R @ VA Power

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G15E-01-06

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.45 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins I-64 crossing.

RIVER MILE: 6.86

LATITUDE: 36.75792 **LONGITUDE:** -76.29697

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the Gillmerton Bridge.

RIVER MILE: 5.48

LATITUDE: 36.77508 **LONGITUDE:** -76.29540

Segment begins I-64 crossing ends at the Gillmerton Bridge.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

Sufficient exceedances of standard for dissolved oxygen were recorded at station (2-SBE006.26,) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The cause of the depressed dissolved oxygen concentrations is unknown.

IMPAIRMENT SOURCE: Unknown

The subject Southern Branch monitoring station is located adjacent to the Virginia Power Plant in Portsmouth. The land use in the watershed is primarily industrial shipping/shipbuilding with dense urban/residential. The watershed potentially receives inputs from storm water runoff associated with the surrounding residential area/urban area. The specific source of the depressed oxygen concentrations is currently unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesapeake

STREAM NAME: St.Julian Creek tributary to Southern Branch Eliza

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G15E-01-07

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.13 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins 1.10 miles upstream from station 2-STJ000.81.

RIVER MILE: 1.91

LATITUDE: 36.78924 **LONGITUDE:** -76.33726

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at mouth, confluence with the Southern Branch Elizabeth River

RIVER MILE: 0.00

LATITUDE: 36.77950 **LONGITUDE:** -76.31025

Segment begins 1.10 miles upstream of monitoring station @ RM 1.91 and extends downstream to the mouth (confluence with Souterh Branch Elizabeth River).

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Fish Tissue - PBCs

Sufficient exceedances of fish tissue screening value for PCBs in fish samples (Shad, Striped Bass) collected in 2001 at station (2-STJ000.81) to assess this segment as not supporting of the Clean Water Act's Fish Consumption Use Support Goal for the 2004 305(b) report. The cause of the elevated fish tissue levels of PCBs is unknown.

IMPAIRMENT SOURCE: Unknown

The monitoring station (2-STJ000.81) is located south of the US Naval Ammunition Depot. The land use in the watershed is primarily wetlands & low density residential. The watershed potentially receives inputs from wetlands areas and storm water runoff. The specific source of the elevated fish tissue PCBs concentration is currently unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesapeake, Norfolk

STREAM NAME: Eastern Branch (Lower), Elizabeth River

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G15E-02-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.58 - Sq. Mi.

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at confluence of Broad Creek with Eastern Branch.

RIVER MILE: 4.00

LATITUDE: 36.83920 **LONGITUDE:** -76.22680

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at confluence with mainstem Elizabeth R.

RIVER MILE: 0.0

LATITUDE: 36.84115 **LONGITUDE:** -76.28748

Segment begins at confluence of Broad Creek downstream to mainstem.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting, Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform, Tributyltin, Fish Tissue - PCBs

Sufficient exceedances of the standard for Fecal Coliform Bacteria were recorded at DEQ's station on the Eastern Branch (2-EBE002.98) to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2002 305(b) report. EPA also required listing of this segment for Fecal Coliform due to 1998 303d Consent Decree & 10.3% violation rate at (2-EBE000.40). The cause of the elevated Fecal Coliform bacteria concentrations is unknown.Sufficient exceedances of Virginia's chronic water quality standard for Tributyltin were recorded at monitoring stations on the Eastern Branch Elizabeth River (2-EBE000.40, 2-EBE001.64) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report.
The cause of the Tributyltin standard exceedances is the presence of water column Tributyltin compounds in excess of the chronic standard (0.001ug/l) in 100% of observations.Exceedance of criteria based fish tissue value for PCBs in fish samples (Croaker,Gizzard Shad, Spot) collected in 2002 at station (2-EBE001.20) to assess this segment as not supporting of the Clean Water Act's Fish Consumption Use Support Goal for the 2004 305(b) report. The cause of the elevated fish tissue levels of PCBs is unknown.

IMPAIRMENT SOURCE: Unknown, Commercial port activities, Unknown

This Eastern Branch Elizabeth River segment supports considerable commercial vessel traffic with tributyltin hull coatings. Ship repair facilities bordering this segment may service vessels with tributyltin hull coatings, per provisions contained in their VPDES permits. This segment also supports considerable commercial vessel traffic with tributyltin hull coatings.The specific source of the tributyltin standard violations is believed to be commercial port activities. The watershed potentially receives inputs from storm water runoff associated with the surrounding residential/urban area. The specific source of the elevated PCBs concentrations in fish tissue is currently unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Norfolk

STREAM NAME: Broad Creek

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G15E-02-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.12 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins one-half mile upstream of Route 58 Bridge.

RIVER MILE: 3.25

LATITUDE: 36.86965 **LONGITUDE:** -76.21363

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the mouth, confluence with Eastern Branch Elizabeth River.

RIVER MILE: 0.00

LATITUDE: 36.84176 **LONGITUDE:** -76.22645

Segment begins one-half mile upstream of Route 58 Bridge downstream to the mouth.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting, Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform & Enterococci (2004), Dissolved Oxygen, Fish Tissue - PCBs

Sufficient exceedances of the standard for Fecal Coliform & Enterococci (2004) bacteria were recorded at station on Broad Creek (02-BRO001.35) to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2002 305(b) report. Sufficient exceedances of standard for dissolved oxygen were recorded at two stations on Broad Cr. (2-BRO001.35, 2-BRO002.95) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The cause of the Fecal Coliform & Enterococci (2004) bacteria standard violation is the presence of enteric bacteria. The cause of the depressed dissolved oxygen concentrations is unknown. Exceedance of criteria based fish tissue value for PCBs in fish samples (Croaker,Gizzard Shad, Spot, Striped Bass) collected in 2002 at station (2-BRO001.35) to assess this segment as not supporting of the Clean Water Act's Fish Consumption Use Support Goal for the 2004 305(b) report. The cause of the elevated fish tissue levels of PCBs is unknown.

IMPAIRMENT SOURCE: Unknown, Unknown, Unknown

The watershed receives inputs from storm water runoff associated with the surrounding residential /urban area. This watershed is ranked high priority for potential NPS pollution by DCR. The source of the enteric bacteria and depressed dissolved oxygen causing the standard violations is currently unknown. The source of the elevated fish tissue levels of PCBs is unknown.
Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesapeake

STREAM NAME: Indian River

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G15E-02-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.1 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at headwaters.

RIVER MILE: 2.70

LATITUDE: 36.80880 **LONGITUDE:** -76.24000

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the mouth, confluence with Eastern Branch Elizabeth River.

RIVER MILE: 0.00

LATITUDE: 36.83450 **LONGITUDE:** -76.24220

Segment begins at headwaters and extends to the mouth, confluence with Eastern Br.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Sufficient exceedances of Virginia's water quality standard for Fecal Coliform Bacteria were recorded at DEQ's ambient water quality monitoring station on Indian Creek (02-IND000.98) to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2002 305(b) report.

The cause of the Fecal Coliform Bacteria standard violation is the presence of enteric bacteria.

IMPAIRMENT SOURCE: Unknown

The watershed receives inputs from storm water runoff associated with the surrounding residential /urban area. The specific source of the enteric bacteria causing the Fecal Coliform Bacteria standard violations is currently unknown. This watershed is ranked high priority for potential NPS pollution by DCR.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Norfolk, Portsmouth

STREAM NAME: Elizabeth River

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G15E-03-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 10 - Sq. Mi.

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the headwaters near Town Point

RIVER MILE: 7.80

LATITUDE: 36.84080 **LONGITUDE:** -76.29130

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends parallel with the downstream northeast corner of the Craney Island Containment Facility.

RIVER MILE: 0.20

LATITUDE: 36.89300 **LONGITUDE:** -76.32940

Segment begins at the origin of the main stem Elizabeth River (approximately Town Point) and extends downstream to parallel with the downstream northeast corner of the Craney Island Containment Facility

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Tributyltin

Sufficient exceedances of the chronic water quality standard (at 100% frequency) for Tributyltin were recorded at monitoring stations on the main stem Elizabeth River (02-ELI002.00, 02-ELI003.17, and 02-ELI006.33) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The cause of the Tributyltin chronic standard exceedances is the presence of Tributyltin compounds in excess of the standard (0.001ug/l).

IMPAIRMENT SOURCE: Commercial port activities

The main stem Elizabeth River monitoring stations are located at the entrance to the Scott Creek channel (02-ELI002.00), at the Lamberts Point coal piers (02-ELI003.17), and at Buoy #18 at Tanner Point (02-ELI006.33). This segment supports considerable commercial vessel traffic with tributyltin hull coatings. Ship repair facilities bordering this segment may service vessels with tributyltin hull coatings, per provisions contained in their VPDES permits. This watershed is ranked high priority for potential NPS pollution by DCR.

The specific source of the tributyltin standard violations is believed to be commercial port activities.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesapeake, Portsmouth

STREAM NAME: Western Branch, Elizabeth R (Upper)

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G15E-04-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.71 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at headwaters.

RIVER MILE: 8.50

LATITUDE: 36.78998 **LONGITUDE:** -76.40943

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at confluence with Sterns Creek.

RIVER MILE: 3.50

LATITUDE: 36.83784 **LONGITUDE:** -76.38322

Segment begins at headwaters and ends at confluence with Sterns Creek..

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform & Enterococci

Sufficient exceedances of Virginia's water quality standard for Fecal Coliform & Enterococci Bacteria were recorded at DEQ's ambient water quality monitoring station on the Western Branch (2-WBE004.44) to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2004 305(b) report. The cause of the Fecal Coliform Bacteria standard violation is the presence of enteric bacteria.

IMPAIRMENT SOURCE: Unknown

The land use in the watershed is primarily high density urban/residential. The watershed potentially receives inputs from wetlands areas and storm water runoff associated with the surrounding residential area/urban area. The specific source of the elevated bacteria concentrations is currently unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesapeake, Portsmouth

STREAM NAME: Western Branch, Elizabeth R

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G15E-04-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.81 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at headwaters.

RIVER MILE: 8.50

LATITUDE: 36.78998 **LONGITUDE:** -76.40943

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at mouth (confluence with Elizabeth River).

RIVER MILE: 0.00

LATITUDE: 36.85798 **LONGITUDE:** -76.33853

Segment begins at headwaters and ends at confluence with Sterns Creek..

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Fish Tissue - PCBs

Sufficient exceedance of criterion based fish tissue value for PCBs at the following monitoring stations (2-WBE002.11 & 2-WBE006.18) to evaluate this segment as not supporting of the Clean Water Act's Fish Consumption Use Support Goal for the 2002 305(b) report (segment expanded in 2004 upstream using station @ RM 6.18).The cause of the elevated fish tissue levels of PCBs is unknown.

IMPAIRMENT SOURCE: Unknown

The land use in the watershed is primarily high density urban/residential. The watershed potentially receives inputs from wetlands areas and storm water runoff associated with the surrounding residential area/urban area. The source of the elevated fish tissue levels of PCBs is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Norfolk

STREAM NAME: Lafayette River

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G15E-05-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.57 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at headwaters, upstream of Tidewater Drive.

RIVER MILE: 7.50

LATITUDE: 36.86493 **LONGITUDE:** -76.25891

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at downstream terminus, confluence with Elizabeth River.

RIVER MILE: 0.00

LATITUDE: 36.90293 **LONGITUDE:** -76.31833

Segment begins at headwaters, upstream of Tidewater Drive and ends at downstream terminus, confluence with Elizabeth River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

Benthic biological monitoring at randomly located stations (segment LAFMHa) indicated benthic community is moderately impaired. As a result, DEQ's General Standard (VR680-21-01.2) is not met for the protection of benthic aquatic life and this segment is assessed as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2004 305(b) report. The cause of the General Standard exceedances is unknown.

IMPAIRMENT SOURCE: Unknown

CBP B-IBI random station monitoring for B-IBI, source of impairment is unknown. The land use in the watershed is primarily urban/residential. Extensive sedimentation is present and frequent dredging occurrs.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Norfolk

STREAM NAME: Lafayette River & Tributaries (Upper)

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G15E-05-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.78 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the Rt 460 Bridge.

RIVER MILE: 4.1

LATITUDE: 36.88866 **LONGITUDE:** -76.28715

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the Rt 337 (Hampton Blvd) bridge

RIVER MILE: 1.72

LATITUDE: 36.90541 **LONGITUDE:** -76.30527

Segment begins at the Rt 460 Bridge and ends at the Rt 337 (Hampton Blvd) bridge.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform & Enterococci (2004), Fish Tissue - PCBs

Sufficient exceedances of the standard for Fecal Coliform & Enterococci (2004) bacteria were recorded at station (02-LAF003.83) in main stem Lafayette R. to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2002 305(b) report. The cause of the Fecal Coliform & Enterococci (2004) bacteria standard violation is the presence of enteric bacteria. Exceedance of criteria based fish tissue value for PCBs in fish samples (Croaker,Gizzard Shad, Spot,Striped Bass) collected in 2002 at station (2-LAF003.00) to assess this segment as not supporting of the Clean Water Act's Fish Consumption Use Support Goal for the 2004 305(b) report. The cause of the elevated fish tissue levels of PCBs is unknown.

IMPAIRMENT SOURCE: Unknown, Unknown

The watershed receives inputs from storm water runoff associated with the surrounding residential /urban area. The specific source of the enteric bacteria causing the Fecal Coliform Bacteria standard violations is currently unknown. The cause of the elevated fish tissue levels of PCBs is unknown. This watershed is ranked high priority for potential NPS pollution by DCR.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Norfolk

STREAM NAME: Lafayette River (Mouth)

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G15E-05-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.62 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the Rt 337 (Hampton Blvd. bridge).

RIVER MILE: 1.72

LATITUDE: 36.90541 **LONGITUDE:** -76.30527

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the mouth, confluence with mainstem Elizabeth River.

RIVER MILE: 0.00

LATITUDE: 36.90620 **LONGITUDE:** -76.31635

Segment begins at the Rt 337 (Hampton Blvd. bridge) ends at the mouth, confluence with mainstem Elizabeth River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Tributyltin

Sufficient exceedances of Virginia's chronic water quality standard for Tributyltin were recorded at monitoring station (2-LAFE001.15) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2004 305(b) report.
The cause of the Tributyltin standard exceedances is the presence of water column Tributyltin compounds in excess of the chronic standard (0.001ug/l) in 100% of observations.

IMPAIRMENT SOURCE: Commercial port activities

The watershed receives inputs from storm water runoff associated with the surrounding residential /urban area. The specific source of the enteric bacteria causing the Fecal Coliform Bacteria standard violations is currently unknown. This watershed is ranked high priority for potential NPS pollution by DCR.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Nelson

STREAM NAME: Montebello Spring Branch

HYDROLOGIC UNIT: 02080203

TMDL ID: VAV-H09R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.02 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Montello Fish Cultural Station

RIVER MILE: 0.02

LATITUDE: 37.85028 **LONGITUDE:** -79.13028

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Mill Creek

RIVER MILE: 0.00

LATITUDE: 37.85000 **LONGITUDE:** -79.13000

Segment begins at the Montebello State Trout Cultural Station discharge and continues downstream to the confluence with Mill Creek .

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting 1998, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic) 1998, pH

2-XXM000.01 - 2 pH values were below the minimum standard out of 3 samples during the 2004 assessment cycle

A benthic survey in the Spring of 1995 indicated severely impaired waters below the Montebello State Trout Hatchery discharge. As a result the 0.02 miles of the stream below the discharge was assessed as not-supporting the Clean Water Act's Aquatic Life Use Support goal for the 1998 305(b) report. The cause of the impairment is organic enrichment and solids deposition. A TMDL has been completed and approved by EPA for this parameter.

IMPAIRMENT SOURCE: PS - Trout Farm - Montebello 1998, Unknown

The source of the pH violations is not known.

The source of the severe benthic impairment is the Trout Cultural Station.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Nelson

STREAM NAME: Hat Creek

HYDROLOGIC UNIT: 02080203

TMDL ID: VAV-H09R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 9.61 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 9.61

LATITUDE: 37.85122 **LONGITUDE:** -78.91001

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the Tye River confluence

RIVER MILE: 0.00

LATITUDE: 37.74884 **LONGITUDE:** -78.97883

Segment begins at the headwaters and ends at the Tye River confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

2-HAT000.14 - 4 fecal coliform violations out of 12 samples during the 2004 assessment period.

IMPAIRMENT SOURCE: NPS

The source is believed to be from NPS runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Amherst, Nelson

STREAM NAME: Piney River

HYDROLOGIC UNIT: 02080203

TMDL ID: VAV-H10R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 11.04 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 11.40

LATITUDE: 37.79056 **LONGITUDE:** -79.11806

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the Rt 151 Bridge.

RIVER MILE: 0.00

LATITUDE: 37.70250 **LONGITUDE:** -79.02806

Segment begins at the headwaters and ends at the Rt 151 Bridge.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

2-PNY005.29 - 6 fecal coliform violations out of 59 samples during the 2002 assessment period.

IMPAIRMENT SOURCE: NPS

The source is believed to be NPS.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Nelson

STREAM NAME: Rucker Run

HYDROLOGIC UNIT: 02080203

TMDL ID: VAV-H13R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 18.39 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 18.39

LATITUDE: 37.78865 **LONGITUDE:** -78.92314

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the Tye River confluence

RIVER MILE: 0.00

LATITUDE: 37.64484 **LONGITUDE:** -78.83730

Segment begins at the headwaters and ends at the Tye River confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

2-RKR000.02 - 2 fecal coliform violations out of 13 samples during the 2004 assessment period.

IMPAIRMENT SOURCE: NPS

The source is believed to be NPS runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Buckingham, Nelson

STREAM NAME: Tye River

HYDROLOGIC UNIT: 02080203

TMDL ID: VAV-H13R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 7.49 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the Buffalo River confluence

RIVER MILE: 7.49

LATITUDE: 37.62299 **LONGITUDE:** -78.89655

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the James River confluence

RIVER MILE: 0.00

LATITUDE: 37.62310 **LONGITUDE:** -78.80520

Segment begins at the Buffalo River confluence and ends at the James River confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

2-TYE000.30 - 6 fecal coliform violations out of 42 samples during the 2004 assessment period.

IMPAIRMENT SOURCE: NPS

The source is believed to be NPS runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Nelson

STREAM NAME: South Fork Rockfish River

HYDROLOGIC UNIT: 02080203

TMDL ID: VAV-H15R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 11.41 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 11.41

LATITUDE: 37.91434 **LONGITUDE:** -78.95952

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the North Fork Rockfish River confluence

RIVER MILE: 0.00

LATITUDE: 37.90399 **LONGITUDE:** -78.83310

Segment begins at the headwaters and ends at the North Fork Rockfish River confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

2-RFS001.00 - 5 fecal coliform violations out of 18 samples during the 2004 assessment period.

IMPAIRMENT SOURCE: NPS

The source is believed to be NPS.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Albemarle

STREAM NAME: Totier Creek Reservoir

HYDROLOGIC UNIT: 02080203

TMDL ID: VAV-H17L-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 66 - Acres

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE:

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE:

LATITUDE: **LONGITUDE:**

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

2-TOT001.01 - 2 DO violations out of 3 samples above the thermocline.

IMPAIRMENT SOURCE: Nutrient enrichment from NPS

The source is nutrient enrichment from non-point sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Albemarle

STREAM NAME: Totier Creek

HYDROLOGIC UNIT: 02080203

TMDL ID: VAV-H17R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 11.29 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 11.29

LATITUDE: 37.82222 **LONGITUDE:** -78.53194

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the James River confluence

RIVER MILE: 0.00

LATITUDE: 37.78417 **LONGITUDE:** -78.49889

Segment begins at the headwaters and ends at the James River confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

2-TOT002.61 - 13 fecal coliform violations out of 49 samples during the 2002 assessment period.

IMPAIRMENT SOURCE: NPS

The source is believed to be Non-Point Source runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Buckingham

STREAM NAME: Little Georgia Creek

HYDROLOGIC UNIT: 02080203

TMDL ID: VAV-H17R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.03 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 6.03

LATITUDE: 37.82222 **LONGITUDE:** -78.53194

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the James River confluence

RIVER MILE: 0.00

LATITUDE: 37.78417 **LONGITUDE:** -78.49889

Segment begins at the headwaters and ends at the James River confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

2-LTD000.96 - 5 fecal coliform violations out of 19 samples during the 2004 assessment period.

IMPAIRMENT SOURCE: NPS

The source is believed to be Non-Point Source runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Albemarle, Buckingham

STREAM NAME: Ballinger Creek

HYDROLOGIC UNIT: 02080203

TMDL ID: VAV-H17R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 9.82 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 9.82

LATITUDE: 37.83585 **LONGITUDE:** -78.62861

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the James River confluence

RIVER MILE: 0.00

LATITUDE: 37.76263 **LONGITUDE:** -78.63855

Segment begins at the headwaters and ends at the James River confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

2-BLR003.00 - 3 fecal coliform violations out of 13 samples during the 2004 assessment period.

IMPAIRMENT SOURCE: NPS

The source is believed to be Non-Point Source runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Buckingham

STREAM NAME: Rock Island Creek

HYDROLOGIC UNIT: 02080203

TMDL ID: VAV-H17R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 8.84 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 8.84

LATITUDE: 37.67481 **LONGITUDE:** -78.59370

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the James River confluence

RIVER MILE: 0.00

LATITUDE: 37.76244 **LONGITUDE:** -78.54014

Segment begins at the headwaters and ends at the James River confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

2-RKI003.40 - 3 fecal coliform violations out of 19 samples during the 2004 assessment period.

IMPAIRMENT SOURCE: NPS

The source is believed to be Non-Point Source runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Albemarle

STREAM NAME: North Fork Hardware River

HYDROLOGIC UNIT: 02080203

TMDL ID: VAV-H18R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 10.42 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 10.42

LATITUDE: 38.00014 **LONGITUDE:** -78.62790

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the South Fork Hardware River confluence

RIVER MILE: 0.00

LATITUDE: 37.91744 **LONGITUDE:** -78.55120

Segment begins at the headwaters and ends at the South Fork Hardware River confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

2-RKI003.40 - 3 fecal coliform violations out of 19 samples during the 2004 assessment period.

IMPAIRMENT SOURCE: NPS

The source is believed to be Non-Point Source runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Albemarle, Fluvanna

STREAM NAME: Hardware River

HYDROLOGIC UNIT: 02080203

TMDL ID: VAV-H19R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 23.03 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 23.03

LATITUDE: 37.91750 **LONGITUDE:** -78.55111

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the James River confluence

RIVER MILE: 0.00

LATITUDE: 37.73750 **LONGITUDE:** -78.40222

Segment begins at the headwaters and ends at the James River confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

2-HRD011.57 - 8 fecal coliform violations out of 49 samples during the 2004 assessment period.

IMPAIRMENT SOURCE: NPS

The source of the fecal coliform is believed to be NPS runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Albemarle

STREAM NAME: Lake Albemarle

HYDROLOGIC UNIT: 02080204

TMDL ID: VAV-H23L-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 40 - Acres

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE:

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE:

LATITUDE: **LONGITUDE:**

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH

2-SIN000.44 - 31 DO violations out of 38 samples below the thermocline. 2-SIN000.44 - 2 pH violations out of 7 samples above the thermocline.

IMPAIRMENT SOURCE: Thermal stratification and nutrient enrichment from NPS, Unknown

The source of the DO impairment is natural thermal stratification exacerbated by nutrient enrichment from non-point sources. The source of the pH impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Albemarle

STREAM NAME: Broad Axe Creek

HYDROLOGIC UNIT: 02080204

TMDL ID: VAV-H23R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.94 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 1.94

LATITUDE: 38.02444 **LONGITUDE:** -78.63844

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the Mechums River confluence

RIVER MILE:

LATITUDE: 38.03441 **LONGITUDE:** -78.66606

Segment begins at the headwaters and ends at the Little Ivy Creek confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

2-BRX000.66 - Moderately Impaired Benthic assessment during the 2004 assessment cycle.

IMPAIRMENT SOURCE: Unknown

The source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Albemarle

STREAM NAME: Beaver Creek

HYDROLOGIC UNIT: 02080204

TMDL ID: VAV-H23R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 7.26 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 9.91

LATITUDE: 38.09300 **LONGITUDE:** -78.71896

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the Public Water Supply Reservoir

RIVER MILE: 2.65

LATITUDE: 38.07084 **LONGITUDE:** -78.65207

Segment begins at the headwaters and ends at the Public Water Supply Reservoir.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

2-BVR005.70 -2 fecal coliform violations out of 16 samples during the 2004 assessment cycle.

IMPAIRMENT SOURCE: NPS

The source is believed to be NPS runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Albemarle, Nelson

STREAM NAME: Mechums River

HYDROLOGIC UNIT: 02080204

TMDL ID: VAV-H23R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 14.06 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 24.50

LATITUDE: 37.97718 **LONGITUDE:** -78.80871

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the Lickinghole Creek confluence

RIVER MILE: 10.44

LATITUDE: 38.06272 **LONGITUDE:** -78.64712

Segment begins at the headwaters and ends at the Lickinghole Creek confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

2-MCM018.92 - Had a Moderately Impaired Benthic assessment during the 2004 assessment cycle. The exact cause of the impairment is not know.

IMPAIRMENT SOURCE: Unknown

The source is unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Albemarle

STREAM NAME: North Fork Moormans River

HYDROLOGIC UNIT: 02080204

TMDL ID: VAV-H24R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 12.52 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 12.52

LATITUDE: 38.21825 **LONGITUDE:** -78.71893

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the South Fork Moormans River confluence.

RIVER MILE: 0.00

LATITUDE: 38.13819 **LONGITUDE:** -78.74795

Segment begins at the headwaters and ends at the South Fork Moormans River confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

USGS 0203143670 - 2 Dissolved Oxygen values were below the minimum Dissolved Oxygen standard during the 2004 assessment cycle.

IMPAIRMENT SOURCE: Unknown

The source is unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Albemarle

STREAM NAME: N.F. Rivanna River

HYDROLOGIC UNIT: 02080204

TMDL ID: VAV-H27R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 10.38 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Confluence with Preddy Creek

RIVER MILE: 10.38

LATITUDE: 38.13000 **LONGITUDE:** -78.40000

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence of NF & SF Rivanna R.

RIVER MILE: 0.00

LATITUDE: 38.07417 **LONGITUDE:** -78.44028

Segment begins at the N.F. Rivanna River's confluence with Preddy Creek and continues downstream to its confluence with the S.F. Rivanna River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

DEQ's biological monitoring station at river mile 2.64 indicated moderate impairment. As a result 6.35 stream miles were assessed as not supporting the Clean Water Act's Aquatic Life Use Support goal for the 1998 305(b) report. The exact cause of the moderately impaired rating is unknown. The stream was not sampled during the 2002 or 2004 assessment periods.

IMPAIRMENT SOURCE: Unknown

The source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Albemarle, Charlottesville

STREAM NAME: Rivanna River

HYDROLOGIC UNIT: 02080204

TMDL ID: VAV-H28R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 13.42 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 42.33

LATITUDE: 38.07278 **LONGITUDE:** -78.43944

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Buck Island Creek

RIVER MILE: 28.91

LATITUDE: 37.96000 **LONGITUDE:** -78.37000

Segment begins at the confluence of the North & South Rivanna Rivers and continues downstream to the Rivanna Rivers confluence with Buck Island Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting - 1998

IMPAIRMENT CAUSE: General Standard (Benthic) 1998

DEQ's biological monitoring station at river mile 35.91 indicated moderate impairment. Therefore 13.42 miles of this stream was assessed as not supporting the Clean Water Act's Aquatic Life Use Support Goal for the 1998 305(b) report. This stream was not sampled during the 2004 assessment period.

IMPAIRMENT SOURCE: NPS - Urban 1998

The source of the benthic impairment is believed to be NPS urban runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Albemarle, Charlottesville

STREAM NAME: Meadow Creek

HYDROLOGIC UNIT: 02080204

TMDL ID: VAV-H28R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.62 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 5.62

LATITUDE: 38.05528 **LONGITUDE:** -78.49611

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the Rivanna River confluence

RIVER MILE: 0.00

LATITUDE: 38.04528 **LONGITUDE:** -78.45444

Segment begins at the headwaters and ends at the Rivanna River confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

2-MWC000.60 - 7 fecal coliform violations out of 18 samples during the 2004 assessment period.

IMPAIRMENT SOURCE: NPS - Urban

The source is believed to be NPS Urban Runoff.

The source of the benthic ratings is not known.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Albemarle, Charlottesville

STREAM NAME: Moores Creek X-Trib

HYDROLOGIC UNIT: 02080204

TMDL ID: VAV-H28R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.57 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 1.57

LATITUDE: 38.02777 **LONGITUDE:** -78.51240

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the Moores Creek confluence

RIVER MILE: 0.00

LATITUDE: 38.01538 **LONGITUDE:** -78.49270

Segment begins at the headwaters and ends at the Moores Creek confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

2-XRC001.15- Moderately Impaired Benthic assessment during the 2004 assessment period.

IMPAIRMENT SOURCE: NPS - Urban

The source is believed to be NPS Urban Runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Albemarle, Fluvanna

STREAM NAME: Rivanna River

HYDROLOGIC UNIT: 02080204

TMDL ID: VAV-H29R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 13.21 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the Moores Creek confluence

RIVER MILE: 39.48

LATITUDE: 38.07278 **LONGITUDE:** -78.43944

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Mechunk Creek

RIVER MILE: 26.27

LATITUDE: 37.96000 **LONGITUDE:** -78.37000

Segment begins at the confluence of Moores Creek and continues downstream to the confluence with Mechunk Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

2-RVN033.65 - 6 fecal coliform violations out of 51 samples during the 2004 assessment cycle.

IMPAIRMENT SOURCE: NPS - Urban

The source of the fecal coliform is believed to be NPS urban runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Fluvanna

STREAM NAME: Middle Fork Cunningham Creek

HYDROLOGIC UNIT: 02080204

TMDL ID: VAV-H32R-01

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 2.47 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 5.54

LATITUDE: 37.87503 **LONGITUDE:** -78.41500

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with unnamed tributary 0.5 miles downstream of the Rt 688 bridge.

RIVER MILE: 3.07

LATITUDE: 37.85955 **LONGITUDE:** -78.33318

Segment begins at the headwaters and continues downstream to the confluence with an unnamed tributary 0.5 miles dowstream of the Rt 688 bridge.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

2-CNM003.82 - Moderately Impaired Benthic assessment during the 2004 assessment cycle.

IMPAIRMENT SOURCE: Natural

The source is Natural.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Bath

STREAM NAME: Jackson River

HYDROLOGIC UNIT: 02080201

TMDL ID: VAV-I01R-01

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 11.21 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the confluence with Muddy Run

RIVER MILE: 68.02

LATITUDE: 38.11463 **LONGITUDE:** -79.79360

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the confluence with Back Creek at Lake Moomau

RIVER MILE: 56.81

LATITUDE: 38.02857 **LONGITUDE:** -79.90065

Begins at the confluence with Muddy Run and continues downstream to the confluence with Back Creek at Lake Moomau.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, 1

IMPAIRMENT CAUSE: Temperature

2-JKS058.60 - Had 13 Temperature values exceed the standard out of 51 samples during the 2004 assessment cycle.

2-JKS067.00 - Had 2 Temperature values exceed the standard out of 18 samples during the 2004 assessment cycle

IMPAIRMENT SOURCE: Natural

The source is natural.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Bath

STREAM NAME: Cowpasture River

HYDROLOGIC UNIT: 02080201

TMDL ID: VAV-I14R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 26.49 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the Bullpasture River confluence

RIVER MILE: 64.88

LATITUDE: 38.18924 **LONGITUDE:** -79.56375

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the Stuart Run confluence

RIVER MILE: 38.39

LATITUDE: 37.99491 **LONGITUDE:** -79.63193

Segment begins at the confluence with the Bullpasture River and continues downstream to the confluence with Stuart Run.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

2-CWP050.66 - 2 fecal coliform violations out of 16 samples during the 2004 assessment cycle.

IMPAIRMENT SOURCE: NPS

The source is believed to be NPS runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Bath

STREAM NAME: Panther Run

HYDROLOGIC UNIT: 02080201

TMDL ID: VAV-I14R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.85 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 1.85

LATITUDE: 37.99834 **LONGITUDE:** -79.78676

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Mare Run

RIVER MILE: 0.00

LATITUDE: 38.01957 **LONGITUDE:** -79.75997

Segment begins at the headwaters and continues downstream to the confluence with Mare Run.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, 1

IMPAIRMENT CAUSE: General Standard (Benthic)

USFS 6018 - Moderately Impaired Benthic assessment during the 2004 assessment cycle (based on only 1 survey).

IMPAIRMENT SOURCE: Acid Deposition

The source is believed to be acid deposition.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Bath

STREAM NAME: South Fork Pads Creek

HYDROLOGIC UNIT: 02080201

TMDL ID: VAV-I17R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.36 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 5.36

LATITUDE: 37.92667 **LONGITUDE:** -79.64586

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Pads Creek

RIVER MILE: 0.00

LATITUDE: 37.88451 **LONGITUDE:** -79.70217

Segment begins at the headwaters and continues downstream to the confluence with Pads Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, 1

IMPAIRMENT CAUSE: General Standard (Benthic)

USFS 6008 - Severely Impaired Benthic assessment during the 2004 assessment cycle.

IMPAIRMENT SOURCE: Acid Deposition

The source is believed to be acid deposition.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Botetourt, Rockbridge

STREAM NAME: Cedar Creek

HYDROLOGIC UNIT: 02080201

TMDL ID: VAV-I28R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 11.52 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 11.52

LATITUDE: 37.62972 **LONGITUDE:** -79.63778

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the James River confluence

RIVER MILE: 0.00

LATITUDE: 37.60750 **LONGITUDE:** -79.54250

Segment begins at the headwaters and ends at the James River confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

2-CEC000.04 - 2 fecal coliform violations out of 14 samples during the 2004 assessment period.

IMPAIRMENT SOURCE: Unknown

The source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Augusta

STREAM NAME: Calfpasture River

HYDROLOGIC UNIT: 02080202

TMDL ID: VAV-I29R-01

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 12.76 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 39.34

LATITUDE: 38.34042 **LONGITUDE:** -79.28957

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the confluence with Tizzle Branch.

RIVER MILE: 26.58

LATITUDE: 38.20026 **LONGITUDE:** -79.37670

Segment begins at the headwaters and ends at the confluence with Tizzle Branch.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

2-CFP029.18 - 4 pH violations out of 9 samples and 2-CFP036.20 - 4 pH violations out of 22 samples during the 2004 assessment period.

IMPAIRMENT SOURCE: Natural Conditions

The source is natural due to an improper standard.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Rockbridge

STREAM NAME: Little Calfpasture River

HYDROLOGIC UNIT: 02080202

TMDL ID: VAV-I32R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.83 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2008

UPSTREAM LIMIT:

DESCRIPTION: Lake Merriweather Dam

RIVER MILE: 0.83

LATITUDE: 37.96028 **LONGITUDE:** -79.45861

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Calfpasture River

RIVER MILE: 0.00

LATITUDE: 37.94944 **LONGITUDE:** -79.45972

Segment begins at the Lake Merriweather Dam and continues downstream to the confluence with the Calfpasture River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

2-LCF000.76 had a severely impaired benthic rating and 2-LCF000.02 had a moderately impaired benthic rating during the 2004 assessment period. The exact cause of the impaired ratings is not known but is believed to be due to excessive solids.

IMPAIRMENT SOURCE: Dam Maintenance

The source of the silt is from the annual maintenance activities performed on the dam.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Augusta

STREAM NAME: Little Calfpasture River

HYDROLOGIC UNIT: 02080202

TMDL ID: VAV-I32R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 10.46 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwater

RIVER MILE: 18.1

LATITUDE: 38.14687 **LONGITUDE:** -79.27785

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Smith Creek

RIVER MILE: 7.64

LATITUDE: 38.04932 **LONGITUDE:** -79.39245

Segment begins at the headwaters and continues downstream to the confluence with Smith Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

2-LCF013.93 - 2 fecal coliform violations out of 12 samples during the 2004 assessment cycle.

IMPAIRMENT SOURCE: NPS

The source is believed to be NPS runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Rockbridge

STREAM NAME: Cedar Grove Branch

HYDROLOGIC UNIT: 02080202

TMDL ID: VAV-I33R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.66 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 4.66

LATITUDE: 37.91549 **LONGITUDE:** -79.32986

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with the Maury River

RIVER MILE: 0.00

LATITUDE: 37.88241 **LONGITUDE:** -79.38585

Segment begins at the headwaters of Cedar Grove Branch and continues downstream to the confluence with the Maury River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

2-CGB001.80 - 7 fecal coliform violations out of 27 samples during the 2004 assessment period.

IMPAIRMENT SOURCE: NPS

The source is NPS runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Augusta, Rockbridge

STREAM NAME: Hays/Moffatts Creeks

HYDROLOGIC UNIT: 02080202

TMDL ID: VAV-I34R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 18.61 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 18.61

LATITUDE: 38.02927 **LONGITUDE:** -79.26195

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with the Maury River

RIVER MILE: 0.00

LATITUDE: 37.89806 **LONGITUDE:** -79.40694

Segment begins at the headwaters of Hays & Moffatts Creeks and continues downstream to the confluence with the Maury River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2004)

2-HYS001.41 - 8 fecal coliform violations out of 27 samples during the 2004 assessment cycle.

IMPAIRMENT SOURCE: NPS

The source is of the fecal impairment is believed to be NPS runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Lexington, Rockbridge

STREAM NAME: Mill Creek

HYDROLOGIC UNIT: 02080202

TMDL ID: VAV-I35R-01

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 8.6 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 8.60

LATITUDE: 37.86667 **LONGITUDE:** -79.32167

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with the Maury River

RIVER MILE: 0.00

LATITUDE: 37.78972 **LONGITUDE:** -79.41611

Segment begins at the headwaters and continues downstream to the confluence with the Maury River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Temperature

2-MIS000.04 - 6 temperature violations out of 27 samples during the 2004 assessment cycle.

IMPAIRMENT SOURCE: Natural

Natural

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Augusta

STREAM NAME: Saint Marys River

HYDROLOGIC UNIT: 02080202

TMDL ID: VAV-I36R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.05 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 7.10

LATITUDE: 37.93139 **LONGITUDE:** -79.04750

DOWNSTREAM LIMIT:

DESCRIPTION: 2.05 miles downstream of the headwaters

RIVER MILE: 5.05

LATITUDE: 37.92472 **LONGITUDE:** -79.13111

The segment begins at the headwaters and continues downstream for 2.05 miles.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

USFS - 5095 - Had a severely impaired benthic rating during the 2002 assessment period. This station was not surveyed during the 2004 assessment cycle.

IMPAIRMENT SOURCE: Atmospheric Deposition

The source is believed to be atmospheric deposition.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Buena Vista, Rockbridge

STREAM NAME: Maury River

HYDROLOGIC UNIT: 02080202

TMDL ID: VAV-I37R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.57 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Confluence with Indian Gap Run

RIVER MILE: 11.50

LATITUDE: 37.72778 **LONGITUDE:** -79.36250

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Buffalo Creek

RIVER MILE: 4.93

LATITUDE: 37.67639 **LONGITUDE:** -79.42528

The segment begins at the confluence with Indian Gap Run and continues downstream to the confluence with Buffalo Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Attachment B

IMPAIRMENT CAUSE: General Standard (Benthic)

2-MRY005.58 - Benthic Monitoring during the 1988 assessment cycle indicated the Aquatic Life Use was fully supporting. However, EPA allowed this segemnt to be added to Attachment B of the Consent Decree. Follow up sampling was not done therefore the segment must be listed on the 2002 303(d) list.

IMPAIRMENT SOURCE: None

There is no real impairment so there is no source.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Buena Vista, Rockbridge

STREAM NAME: Maury River

HYDROLOGIC UNIT: 02080202

TMDL ID: VAV-I37R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.48 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Confluence with South River

RIVER MILE: 15.98

LATITUDE: 37.76749 **LONGITUDE:** -79.38483

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Indian Gap Run

RIVER MILE: 11.50

LATITUDE: 37.67639 **LONGITUDE:** -79.42528

The segment begins at the confluence with Indian South River and continues downstream to the confluence with Indian Gap Run.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: PCBs

2-MRY011.23 - PCBs in three species of fish in 2001.

IMPAIRMENT SOURCE: Unknown

Unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Rockbridge

STREAM NAME: Buffalo Creek

HYDROLOGIC UNIT: 02080202

TMDL ID: VAV-I38R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 8.33 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the Rt 610 bridge

RIVER MILE: 9.33

LATITUDE: 37.72056 **LONGITUDE:** -79.60083

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the Rt 608 bridge

RIVER MILE: 1.00

LATITUDE: 37.68611 **LONGITUDE:** -79.42547

Segment begins at the Rt 610 bridge over Buffalo Creek and continues downstream to the Rt 608 bridge

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

2-BLD001.00 - 2 fecal coliform violations out of 16 samples

IMPAIRMENT SOURCE: NPS - Agriculture/Wildlife

The primary source of the fecal coliform bacteria is from NPS agricultural and wildlife runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Bedford

STREAM NAME: Reed Creek

HYDROLOGIC UNIT: 02080203

TMDL ID: VAW-H01R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 12.27 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Headwaters in Jefferson National Forest.

RIVER MILE: 12.27

LATITUDE: 37.49806 **LONGITUDE:** -79.44470

DOWNSTREAM LIMIT:

DESCRIPTION: Reed Creek mouth on James R. below Big Island.

RIVER MILE: 0.00

LATITUDE: 37.52444 **LONGITUDE:** -79.35011

The upper limit is the headwaters in the Jefferson National Forest on the Sedalia Quad. The segment ends at the mouth of Reed Creek on the James River below Big Island, Virginia. The segment spans the Snowden, Sedalia and Big Island Quads.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
The Reed Creek Total Maximum Daily Load (TMDL) Bacteria Load Duration Analysis Study is underway with an anticipated completion in 2004. Three stations are located in the impaired segment. 2-RED000.16 (Off Route 501), the original listing station, and two additional stations 2-RED005.36 (Route 637 Bridge) and 2-RED008.32 (Route 122 Bridge). Escherichia coli (E. coli) data from each station is currently insufficient to assess.

Fecal coliform bacteria in the waters cause nonsupport of the recreational use at 2-RED000.16. Eight of 19 samples exceed the instantaneous criterion of 400 cfu/100 ml. The range of exceeding values is 500 to 3600 cfu/100 ml. The segment remains listed as in 1998.

Station 2-RED005.36 finds three of three fecal coliform bacteria samples exceed the instantaneous criterion. The exceeding values range from 490 to 1700 cfu/100 ml. Station 2-RED008.32 records one of three samples exceeding the criterion at greater than 800 cfu/100 ml, although insufficient to assess.

IMPAIRMENT SOURCE: NPS - Agriculture/Wildlife

Recreational Use
The impairment source is believed to be due to agricultural / wildlife nonpoint source runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Alleghany, Botetourt, Covington

STREAM NAME: Jackson River

HYDROLOGIC UNIT: 02080201

TMDL ID: VAW-I04R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 25.45 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Just downstream of the Covington water intake.

RIVER MILE: 25.45

LATITUDE: 37.81639 **LONGITUDE:** -79.98904

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence of the Jackson and Cowpasture Rivers.

RIVER MILE: 0.00

LATITUDE: 37.78417 **LONGITUDE:** -79.77614

The segment's upstream limit is on the Jackson River just below the Covington City Water Treatment Plant coursing downstream to the confluence of the Jackson and Cowpasture Rivers.

Note: The original 1998 VAW-I04R and VAW-I09R listed segments were combined into one segment in 2002. The Recreational use fecal coliform bacteria impairment was extended upstream 1.24 miles in VAW-I04Rin 2002.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform - 3.38 miles, General Standard (Benthic) - 24.21 miles, Dissolved Oxygen - 11.21 miles

The original 1998 VAW-I04R and VAW-I09R listed segments were combined into one segment in 2002. The recreational use fecal coliform bacteria impairment was extended upstream by 1.24 miles in the 2002 cycle in VAW-I04R.

2004 Assessment station locations are:
2-JKS000.38 - Rt. 727 Bridge - near Iron Gate (I09R)
2-JKS006.67 - Low Water Bridge - near Dabney Lancaster CC (I09R)
2-JKS011.92 - Island Ford Bridge, Rt. 1101 - (I09R) SS
2-JKS013.29 - Off Rt. 696 above Lowmoor (I09R)
2-JKS013.45 - Island Ford Cave above Lowmoor - (I09R) SS
2-JKS015.80 - Between I-64 & CSX Railroad N/Mallow - (I09R) SS
2-JKS017.03 - Byrd's Farm #2 - (I09R) SS
2-JKS017.30 - Byrd's Farm East of Covington - (I09R) SS
2-JKS018.68 - Rt. 18 Bridge at Covington (I09R - 1999 Federal Consent Decree Attachment B station for FC)
2-JKS018.68 - Rt. 18 Bridge at Covington - (I09R) SS Benthic
2-JKS021.06 - S. Rayon Dr. Bridge, Covington - (I09R) SS
2-JKS022.15 - Industrial Park behind Wal-Mart - (I09R) SS
2-JKS022.78 - Fudge's Bridge, Rt. 154, Covington - (I09R) SS
2-JKS023.32 - Swinging Bridge (I09R)
2-JKS023.61 - City Park - Covington at gage (I09R)
2-JKS023.61 - City Park - Covington at gage - (I09R) SS Benthic

Fact Sheets for Category 5 Waters

2-JKS024.20 - Rt. 60 Bridge, Covington - SS (I09R - Also coded 2-JKS024.14)
2-JKS026.01 - Covington Water Filtration Plant (I04R) - SS
2-JKS030.65 - Rt. 687 Bridge - Clearwater Park (I04R)

Recreational Use
No exceedances of the fecal coliform bacteria instantaneous criterion of 400 n/100 ml are recorded at 2-JKS030.65 (I04R) in 58 samples. Exceedances of the criterion occur at 2-JKS023.61 (I09R) in 13 of 60 samples over the 2004 five year period. Nonsupport extends from river mile 25.45 (I04R- 1.71 miles) to 22.07 (I09R- 1.67 miles), a total distance of 3.38 miles. WQS require that once a minimum of 12 Escherichia coli (E. coli) data points are collected the bacterial indicator of preference will be E. coli. A discussion of the listing follows.

2-JKS018.68 records only one of 58 samples exceeding the instantaneous criterion meeting the recreational use. Station 2-JKS018.68 is a 1999 Federal Consent Decree Attachment B station for fecal coliform bacteria and was not 2002 303(d) Listed. Past 305(b) reporting cycles in 1994 and 1996 note nonsupport downstream of 2-JKS018.68. 2002 Assessment data at 2-JKS006.67 and 2-JKS000.38 each find two exceedances in 58 samples. All the aforementioned stations support the recreational use.

Mead/Westvaco Corporation performs confirmed phase testing for determining the presence of fecal coliform bacteria. Klebsiella pneumoniae can give false positive results for fecal coliform bacteria in the confirmed phase of testing. The company has extended testing to the completed phase. The completed test is performed on all positive confirmed phase samples. The results of the completed phase test provides more specific data for the presence of true fecal coliform bacteria. Effluent data reported show the majority of confirmed phase positive fecal coliform bacteria counts found are Klebsiella pneumoniae. The company will begin bacterial water quality monitoring in both the effluent and two downstream sites in 2002.

Past sewage pump station overflows, as well as some overflows at manholes, have been noted both upstream in VAW-I04R and in VAW-I09R. In 1988 Covington City became subject to a consent decree requiring elimination of combined sewer overflows; this work was completed in 1995 and the decree canceled. The City of Covington was subject to a consent order and penalty for an overflow in 1997.

Capital improvements have been made (1995 to 1999) to the collection and storm water systems. These improvements include Parrish Court (1995 & 1998; removal of storm water connections), Parklin Heights (1996), Dry Run (1998), Magazine Street (1998) and downtown sections of the City correcting I&I problems. Roof drains and sump pumps have been disconnected from the sewer system. In 1999 work on manholes in the downtown area was completed.

More recent capital improvements have been completed by Alleghany County for the Clearwater / Interval portion served by Covington. Installation of pump stations at Clearwater Park and Interval are complete as well as construction of an equalization basin and pump station ahead of the Covington Dry Run pump station. Initiation of operations began February 5, 2001. February 6, 2002 Alleghany County provided Submittal of Performance Certification (equipment performance standards verified).

Station 2-JKS023.61 reports no exceedances from 15 observations for Escherichia coli (E. coli- 235 cfu/100 ml WQS instantaneous criterion); these waters are 1998 303(d) listed for fecal coliform bacteria. WQS require the use of E. coli for assessments with 12 observations making this segment a candidate for bacterial 303(d) delisting.

However E. coli monthly collections were made in the period Feb 2000 thru June 2001 during the 4 year drought from 1999-2002. Fecal coliform bacteria observations exceed the 400 cfu/100 ml instantaneous criterion in 13 of 60 samples spanning the Assessemnt data window of Januray 1998 through December 2002. Maximum fecal coliform values are in excess of 8000 cfu/100 ml. Numerous overflows from the collector system in the Covington urban area have been recorded with most occurances during storm events. The lack of E. coli data collections under more average conditions, the magnitude of fecal coliform criterion excursions and reported collector system overflows indicate the impaired status should remain for the 3.38 mile segment. An additional cycle of E. coli data collection will aid in the subsequent continued bacterial listing or de-listing action in 2006.

Aquatic Life Use
General Standard (Benthic): An aquatic life use nonsupport portion extends 2.14 miles on the Jackson from river mile 24.21 (I04R- 0.47 miles) (37°48'01.31" / 079°59'33.79") to 22.07 (I09R- 1.67 miles) due to severe impacts to the benthic community as measured at 2-JKS023.61. Rapid Biological Protocol II (RBP II) surveys report the invertebrate community is dominated by taxa that are tolerant of environments with low dissolved oxygen and high levels of solids (e.g.. Tubificidae, Planariidae, Chironomidae, and Simulidae).

Nonsupport continues 9.07 miles downstream from river mile 22.07 to 13.00 as measured at 2-JKS018.68 (10 RBP II surveys). 2-JKS018.68 shows some improvement relative to the City Park station. However, the benthic community is still dominated by pollution tolerant taxa.

Nonsupport is found at 2-JKS013.29 river miles 13.00 to 5.19 (nine surveys). The Lowmoor station has consistently had lower assessment scores and higher numbers of pollution tolerant organisms. Over the five-year period there is no difference in scores.

And further downstream nonsupport is exhibited at 2-JKS0006.67 (nine surveys) from 5.19 on downstream to the Jackson River confluence with the Cowpasture River. Results from fall surveys may indicate a more stressed benthic community when stream flow is naturally lower and pollution effects more evident.

Impairments to the benthic community are believed due to nutrient and organic enrichment (deposition) for 24.21 miles. Based on ambient station solids data, the nutrients and organics are mainly dissolved.

Dissolved Oxygen: Diurnal swings in dissolved oxygen cause nonsupport of the aquatic life use for a total of 11.21 miles extending from river mile 24.21 (I04R- 0.47 miles) to 13.00 (I09R- 10.74 miles) (37°46'49.59 / 079°55'40.00"). Although there are only six excursions of the

minimum 4.0 mg/l dissolved oxygen (DO) standard in the ambient data for the 2004 Assessment data window multiple excursions are found in dissolved oxygen recorder data.

Ambient and intensive data indicate a diurnal affect. Intensive survey recorder data confirm late summer and early fall diurnal excursions of the minimum DO. A YSI 6000 recorder found 222 exceedances of the minimum from 481 measurements over approximately four days, September 16 through 21 in 1998. The minimum found is 1.22 mg/l on 09/21 at 8:15 AM and the maximum the same day at 12:00 noon 9.64 mg/l. Measurements at 2-JKS023.61 collected outside the monthly sampling program found six of 25 exceedances.

Total Phosphorus and sediment collections cause all or portions of the Jackson River 303(d) Listed segment to be 'Waters of Concern'. The narrative below provides the reasons for concern.

Total Phosphorus: Elevated total phosphorus concentrations are believed one of the causes for dissolved oxygen diurnal depressions. Elevated concentrations are found in the entire 24.21 mile segment. Total phosphorus threshold exceedances extend to the mouth of the Jackson River as measured at 2-JKS000.38 where 25 of 58 total phosphorus samples exceed the 0.20 mg/l screening value. 2-JKS023.61 found 27 of 58, 2-JKS018.68; 9 of 40, 2-JKS013.29; 6 of 10 and 2-JKS006.67, 15 of 49 exceeds of the SV.

Each of the five ambient station arithmetic average total phosphorus concentrations are above the 0.20 mg/l threshold. Concentrations range from 0.24 mg/l at 2-JKS000.38 to 0.29 at 2-JKS023.61 in the 2004 five year data window. Examination of the 2004 maxima show a increase in magnitude from 0.70 to 1.41 mg/l where 2002 maxima show a decrease in magnitude from 0.70 mg/l to 1.20 mg/l versus 2000 Cycle maxima of 2.10 to 3.40 mg/l at the aforementioned stations. In contrast an upstream station 2-JKS030.65 (I04R) reports concentrations below 0.20 mg/l for the five year period. Ambient station solids data indicate the nutrients and organics are mainly dissolved. No total phosphorus SV exceedances were found in tributary data from Dunlap Creek 2-DNP001.98 (I07R) 16 samples, Potts Creek 2-POT000.12 (I11R) 32 samples, or at Wilson Creek 2-WLN010.35 (I09R) 15 samples.

Sediment: The Jackson River from the US 60/220 crossing (37°48'33.81" / 079°50'36.65") downstream to the Jackson and Cowpasture River confluence. A distance of 5.19 miles finds exceedance of the Consensus Based Probable Effects Concentration (PEC) screening value (SV) from a 2000 sediment collection for nickel (Ni, SV= 48.6 ppm, at 49.1 ppm.). 1998 and 2000 sediment collections find exceedances for nickel (Ni, PEC SV of 48.6 ppm at 65.6 and 49.3 ppm. Each of the excursions result in 'Observed Effects' causing these waters to be a 'Water of Concern'.

IMPAIRMENT SOURCE: NPS - Urban, PS - Ind. & Mun. / NPS - Urban

Recreational Use
Previous assessments surmised urban nonpoint source runoff, primarily pump station overflows in watershed I04R, are believed the source for failure to meet the recreational use for previous listings. Additional E. coli bacteria monitoring will aid in deciding the status (eg. list or de-list) of the bacteria impairment in 2006.

Aquatic Life Use
The source of the biological impairment is believed organic deposition due to elevated total phosphorus. The dissolved oxygen impairment is believed due to elevated total phosphorus concentrations causing diurnal depressions. Point source (PS) discharges and urban runoff are believed contributing to the elevated total phosphorus concentrations in the Jackson River.

The source(s) of the sediment metal, nickel (Ni) exceedances are not known.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Alleghany, Bath

STREAM NAME: Cedar Creek

HYDROLOGIC UNIT: 02080201

TMDL ID: VAW-I05R-01N

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 3.37 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Cedar Creek from an unnamed tributary located 3.43 miles above its mouth.

RIVER MILE: 3.37

LATITUDE: 37.97889 **LONGITUDE:** -79.91073

DOWNSTREAM LIMIT:

DESCRIPTION: Cedar Creek mouth on Jackson River.

RIVER MILE: 0.00

LATITUDE: 37.94306 **LONGITUDE:** -79.94514

Cedar Creek mainstem from its mouth on the Jackson River upstream 3.43 miles. The entire segment is on the Falling Spring Quad.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Temperature

Aquatic Life Use
Exceedances of the 20 °C temperature WQS Class VI criterion are found at station 2-CRE002.37, Rt. 605 Bridge in Bath County. Ten of 43 samples exceed the criterion in these natural trout waters causing nonsupport of the aquatic life use. Exceedances ranged from 20.2 °C in May 1998 to 24 °C in June,15 2000. Exceedances occur primarily in the summer months of June through August.

IMPAIRMENT SOURCE: Natural Conditions

Aquatic Life Use
The water temperature exceedances are believed to be due to natural conditions. There are no known sources of heat to cause exceedance of the temperature criterion other than natural solar radiation.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Alleghany

STREAM NAME: Sweet Springs Creek

HYDROLOGIC UNIT: 02080201

TMDL ID: VAW-I06R-01N

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 2.69 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Sweet Spring Cr. headwaters at the VA/WVA State Line

RIVER MILE: 2.69

LATITUDE: 37.63778 **LONGITUDE:** -80.24002

DOWNSTREAM LIMIT:

DESCRIPTION: Sweet Springs Cr. mouth on Dunlap Cr.

RIVER MILE: 0.00

LATITUDE: 37.67028 **LONGITUDE:** -80.24094

Sweet Springs Creek mainstem from its confluence with Dunlap Creek to its headwaters.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Temperature

Aquatic Life Use
Station 2-SSC000.25 (Route 603 Bridge at Earlehurst) records temperature exceedances of the WQS 21°C criterion for stockable trout waters in three of 18 observations, believed naturally occuring. The maximum exceedance occurs on 7/6/99 at 24 °C. The remaining two exceedances occur on 8/8/00 at 23 °C and 8/05/02 at 23 °C. Each year experienced low stream flow or drought conditions.

IMPAIRMENT SOURCE: Natural Conditions

Aquatic Life Use
The water temperature exceedances are believed due to natural conditions. There are no known sources of heat to cause exceedance of the temperature criterion other than natural solar radiation.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Alleghany

STREAM NAME: Smith Creek

HYDROLOGIC UNIT: 02080201

TMDL ID: VAW-I09R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.19 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Above the I-64 Crossing of Smith Creek.

RIVER MILE: 1.19

LATITUDE: 37.82929 **LONGITUDE:** -79.82893

DOWNSTREAM LIMIT:

DESCRIPTION: Smith Creek mouth on the Jackson R.

RIVER MILE: 0.00

LATITUDE: 37.81424 **LONGITUDE:** -79.82458

The impaired waters extend from just above the I-64 crossing of Smith Creek downstream to the Smith Creek mouth on the Jackson River. The entire segment is on the Clifton Forge Quad.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
Fecal coliform bacteria excursions of the 400 cfu/100 ml instantaneous criterion are found in five of 13 observations at 2-SMH000.08. FC values range from less than 100 to 1500 cfu/100 ml. Station 2-SMH000.08 is located on Ridgeway Street in Clifton Forge.

IMPAIRMENT SOURCE: NPS - Urban

Recreational Use
The believed source is urban nonpoint source pollution.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Bath

STREAM NAME: Wilson Creek

HYDROLOGIC UNIT: 02080201

TMDL ID: VAW-I09R-02

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 6.6 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Wilson Cr. Headwaters.

RIVER MILE: 15.1

LATITUDE: 37.97556 **LONGITUDE:** -79.81078

DOWNSTREAM LIMIT:

DESCRIPTION: Backwaters of Douthat Lake.

RIVER MILE: 8.50

LATITUDE: 37.90894 **LONGITUDE:** -79.79689

The upper limit of the segment is the headwaters of Wilson Creek extending downstream to the backwaters of Douthat Lake.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Temperature

Aquatic Life Use
Temperature exceeds the WQS natural trout water 20°C criterion in two of 18 observations at 2-WLN010.35. Excursions of the WQS are 21°C each on 6/27/2000 and 8/09/2000. Station 2-WLN010.35 is located at Rt. 629 above the confluence of Dry Run.

IMPAIRMENT SOURCE: Natural

Aquatic Life Use
The exact source of the temperature exceedances is not known other than natural solar radiation.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Alleghany, Craig

STREAM NAME: Potts Creek

HYDROLOGIC UNIT: 02080201

TMDL ID: VAW-I10R-01

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 9.51 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Potts Creek from the confluence of Paint Bank Branch.

RIVER MILE: 38.61

LATITUDE: 37.56998 **LONGITUDE:** -80.26173

DOWNSTREAM LIMIT:

DESCRIPTION: Potts Creek at the of Hamilton Branch.

RIVER MILE: 29.10

LATITUDE: 37.61780 **LONGITUDE:** -80.20503

Potts Creek from the confluence of Paint Bank Branch downstream to the mouth of Hamilton Branch.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

Aquatic Life Use
Two (9.1 and 9.2 SU) of four pH measurements exceed the 9.0 SU WQS criterion at 2-POT030.66 (Above the Route 18 Bridge near campsite).

IMPAIRMENT SOURCE: Unknown

Aquatic Life Use
The exact source(s) of the pH exceedances are not known.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Botetourt

STREAM NAME: James River

HYDROLOGIC UNIT: 02080201

TMDL ID: VAW-I18R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 15.36 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Confluence of the Jackson & Cowpasture Rivers.

RIVER MILE: 346.49

LATITUDE: 37.78417 **LONGITUDE:** -79.77611

DOWNSTREAM LIMIT:

DESCRIPTION: Just above confluence of Craig Creek on the James at river mile 331.55.

RIVER MILE: 331.13

LATITUDE: 37.64583 **LONGITUDE:** -79.81306

The upper limit is the confluence of the Jackson and Cowpasture Rivers at river mile 346.49 near Iron Gate, Va. (Clifton Forge Quad). The lower limit is the mouth of Craig Creek on the James River at river mile 331.55 (Eagle Rock Quad near Gala, Virginia.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

Originally listed in 1998 the segment continues to be impaired based on current Rapid Bioassment Protocol II (RBP II) survey data (seven surveys). The segment brackets biological station 2-JMS345.73 (Rt. 220 Bridge near Gage). This station shows the first discernible sign of improvement in water quality from upstream Jackson River RBP II stations. The station is moderately impaired because Tubificid worms are the dominant organism.

Additional study is required to determine the exact pollutant(s) or pollution causing the impairment. However ambient data from headwater tributary stations indicate the benthic impairment may be the result of nutrient and organic enrichment / solids deposition. Total phosphorus and solids data from 2-JKS000.38 (Rt. 727 Bridge near Iron Gate - VAW-I09R) sampled monthly. Total phosphorus data from 2-JKS000.38 found exceedances of the 0.20 mg/l threshold in 25 of 58 samples. These results cause the waters to be a 'Water of Concern'. The data range from <0.01 to 0.70 mg/l. Five of the 58 samples are reported below 0.10 mg/l.

Previous assessments have noted similar exceedance rates at 2-JKS000.38 with much lower excursion rates on tributary streams. The 2002 Assessment found 2-JKS000.38 dissolved solids are nearly 80% greater than 2-CWP002.58. Additionally, limited total phosphorus data collected quarterly from 2-JMS326.30 downstream in I24R found two of 16 samples exceeding the total phosphorus screening value.

Tributaries to the segment are also monitored for phosphorus. Mill (2-MIV000.39-16 samples) and Craig (2-CRG001.20- 25 samples) Creeks found no total phosphorus exceedances. These data in combination suggest the presence of elevated total phosphorus concentrations and organic solids deposition may be contributing to the benthic impairment in VAW-I18R.

IMPAIRMENT SOURCE: PS / Ind. & Mun. / NPS-Urban

The impairment source is believed due to nutrient and organic deposition attributable to upstream point source (PS) discharges in the Covington/Clifton Forge area as well as contributory urban nonpoint source (NPS) runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Botetourt

STREAM NAME: Mill Creek

HYDROLOGIC UNIT: 02080201

TMDL ID: VAW-I18R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.93 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Just above Rebecca Furnace

RIVER MILE: 4.93

LATITUDE: 37.68099 **LONGITUDE:** -79.74690

DOWNSTREAM LIMIT:

DESCRIPTION: Mill Creek mouth on the James R.

RIVER MILE: 0.00

LATITUDE: 37.68896 **LONGITUDE:** -79.81384

The upper limit of the segment is located just above Rebecca Furnace downstream of Allen Creek extending on downstream to the Mill Creek mouth on the James River at Gala.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
Three excursions of the WQS instantaneous crterion of 400 cfu/100 ml are found in 17 samples at 2-MIV000.39 (Route 694 Bridge, Gala). The maximum exceedance is 1300 cfu/100 ml. The remaining two exceedances are 500 cfu/100 ml each.

IMPAIRMENT SOURCE: NPS

Recreational Use
The exact source of the fecal coliform bacteria is not known but is believed to be non-point source related.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Craig

STREAM NAME: Craig Creek

HYDROLOGIC UNIT: 02080201

TMDL ID: VAW-I19R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 7.78 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Turnpike Cr. mouth on Craig Cr.

RIVER MILE: 65.27

LATITUDE: 37.39533 **LONGITUDE:** -80.21536

DOWNSTREAM LIMIT:

DESCRIPTION: Rt. 311 crossing downstream of Abbott

RIVER MILE: 57.49

LATITUDE: 37.42866 **LONGITUDE:** -80.12924

The upper limit of the segment is at the mouth of Turnpike Creek extending downstream to the Rt. 311 crossing located downstream of the Abbott community.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
Station 2-CRG062.29 (Route 621 Bridge) finds three of 27 fecal coliform bacteria exceedances cause these waters to not meet the WQS instantaneous criterion of 400 cfu/100 ml. The maximum FC found is 1100 cfu/100 ml with the remaining values at 900 and 500.

IMPAIRMENT SOURCE: NPS

Recreational Use
Contributing sources to the impairment could include agriculture, residential and wildlife. The exact contribution of each is not known.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Craig

STREAM NAME: Meadow Creek

HYDROLOGIC UNIT: 02080201

TMDL ID: VAW-I20R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.53 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Upstream of the Rt. 42 crossing.

RIVER MILE: 2.53

LATITUDE: 37.48082 **LONGITUDE:** -80.13953

DOWNSTREAM LIMIT:

DESCRIPTION: Meadow Cr. mouth on Craig Cr.

RIVER MILE: 0.00

LATITUDE: 37.49073 **LONGITUDE:** -80.10206

The upstream extent of the segment is just above the Rt. 42 crossing of Meadow Creek downstream to the Meadow Creek confluence with Craig Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
Fecal coliform bacteria exceeds the instantaneous WQS criterion of 400 cfu/100 ml in two of 18 samples. 1300 cfu/100 ml is the maximum found in the dataset with the second at 900 cfu/100 ml.

IMPAIRMENT SOURCE: NPS

Recreational Use
The exact source of the fecal coliform bacteria is not known. Two possible contributors could be residential/urban or wildlife.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Craig

STREAM NAME: Johns Creek

HYDROLOGIC UNIT: 02080201

TMDL ID: VAW-I21R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.19 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Johns Cr. upstream of New Castle near Lovers Leap.

RIVER MILE: 2.19

LATITUDE: 37.50922 **LONGITUDE:** -80.13484

DOWNSTREAM LIMIT:

DESCRIPTION: Johns Cr. mouth on Craig Cr.

RIVER MILE: 0.00

LATITUDE: 37.50306 **LONGITUDE:** -80.10270

The upstream end of the segment is near Lovers Leap upstream of New Castle and extends downstream to Johns Creek mouth on Craig Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
Fecal coliform bactera exceedances are found at 2-JOB000.39 (Rt. 615 Bridge in New Castle) in two of 18 samples. The maximum exceeding value is 1300 cfu/100 ml and the second at 600. Both values are in excess of the WQS instantaneous criterion of 400 cfu/100 ml. The waters do not support the recreational use.

IMPAIRMENT SOURCE: NPS - Urban

Recreational Use
The believed source is urban nonpoint source pollution.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Craig

STREAM NAME: Barbours Creek

HYDROLOGIC UNIT: 02080201

TMDL ID: VAW-I22R-01

ASSESSMENT CATEGORY: 5A/5C

SEGMENT SIZE: 7.07 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Valley Branch mouth on Barbours Cr.

RIVER MILE: 7.07

LATITUDE: 37.54667 **LONGITUDE:** -80.12235

DOWNSTREAM LIMIT:

DESCRIPTION: Barbours Cr. mouth on Craig Cr.

RIVER MILE: 0.00

LATITUDE: 37.53000 **LONGITUDE:** -80.03708

Barbours Creek from just downstream of the Rt. 617 and 611 junction at the mouth of Valley Branch on downstream to its mouth on Craig Creek. The entire segment is on the New Castle Quad.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreational Use - Not Supporting, Aquatic Life Use - Not Supported

IMPAIRMENT CAUSE: Fecal Coliform (2004), Temperature (2002)

Recreational Use
The maximum fecal coliform of 1100 cfu/100 ml and a second at 500 both exceed the WQS instantaneous criterion of 400 cfu/100 ml from 18 samples. The fecal coliform impairment is a 2004 addition (Category 5A) to the original 2002 listing for temperature described below.

Aquatic Life Use
Originally listed for temperature in 2002 (Category 5C). The segment remains impaired due to temperature exceedances. Three of eighteen measurements at 2-BAR000.60 (Rt. 614 Bridge) exceed the 20 °C temperature criterion for this natural trout water (WQS Class VI). All exceedances occur in the month of July in the years 1998, 1999 and 2000. The maximum exceedance of 22.3 °C occurs in July 2000.

IMPAIRMENT SOURCE: NPS, Natural Conditions

Recreational Use
Nonpoint source runoff is the believed source although the exact sources are not known.

Aquatic Life Use
The source of the temperature exceedance is believed to be due to solar radiation. There are no known heat sources in the segment.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Craig

STREAM NAME: Mill Creek

HYDROLOGIC UNIT: 02080101

TMDL ID: VAW-I22R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: The headwaters of Mill Cr.

RIVER MILE: 6.00

LATITUDE: 37.61128 **LONGITUDE:** -80.03243

DOWNSTREAM LIMIT:

DESCRIPTION: Mill Cr. confluence with Craig Cr.

RIVER MILE: 0.00

LATITUDE: 37.56260 **LONGITUDE:** -80.03081

Mill Creek headwaters downstream to its confluence with Craig Creek

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

Aquatic Life Use
A US Forest Service site 6515 located approximately 2.90 miles from the Mill Creek mouth on Craig Creek finds the benthic community moderately impaired. A single 1998 MAIS survey score is 10; rating Poor/Fair or moderately impaired.

Additional collections made at 6516 and 6514 downstream of 6515 are outside the 2004 data window. However each of the MAIS surveys found moderate impairment. Based on these results the 2002 assessment noted these waters as 'Water of Concern'. A DEQ cursory site visit agrees with USFS MAIS surveys. Therefore Mill Creek is assessed impaired for the aquatic life use.

IMPAIRMENT SOURCE: Mine Tailings, Inactive Mining Site

Aquatic Life Use
The benthic impairment is believed to be related to legacy mining activity in the headwaters of Mill Creek.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Botetourt

STREAM NAME: Crawford Branch

HYDROLOGIC UNIT: 02080201

TMDL ID: VAW-I22R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.76 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: The headwaters of Crawford Br.

RIVER MILE: 1.76

LATITUDE: 37.69342 **LONGITUDE:** -79.92471

DOWNSTREAM LIMIT:

DESCRIPTION: Crawford Br. confluence with Craig Cr.

RIVER MILE: 0.00

LATITUDE: 37.68400 **LONGITUDE:** -79.89651

Crawford Branch headwaters downstream to its confluence with Craig Creek

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

Aquatic Life Use
A US Forest Service site 6570 located approximately 0.19 miles from the Crawford Branch mouth on Craig Creek finds the benthic community moderately impaired. A single 1999 MAIS survey score is 11; rating Poor/Fair or moderately impaired.

IMPAIRMENT SOURCE: Unknown

Aquatic Life Use
The exact source of the benthic impairment is not known.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Botetourt

STREAM NAME: Little Patterson Creek

HYDROLOGIC UNIT: 02080201

TMDL ID: VAW-I22R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.65 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Little Patterson Cr. just upstream of the Rt. 684 crossing.

RIVER MILE: 3.65

LATITUDE: 37.60162 **LONGITUDE:** -79.87411

DOWNSTREAM LIMIT:

DESCRIPTION: Little Patterson Cr. confluence with Patterson Cr.

RIVER MILE: 0.00

LATITUDE: 37.64190 **LONGITUDE:** -79.86213

Little Patterson Creek from just upstream of the Rt. 684 (Sugar Tree Hollow Rd.) crossing downstream to its confluence with Patterson Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
Station 2-LIP001.00 finds 2 fecal colifrom samples exceeding the 400 cfu/100 ml WQS instantaneous criterion from 9 samples. The two exceedances are 2800 and 2100 cfu/100 ml. This causes the waters to not support the recreational use.

IMPAIRMENT SOURCE: NPS

Recreational Use
The exact source of the bacteria impairment is not known but is believed nonpoint source related.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Botetourt

STREAM NAME: James River

HYDROLOGIC UNIT: 02080201

TMDL ID: VAW-I24R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.99 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Craig Cr. mouth on James R.

RIVER MILE: 331.13

LATITUDE: 37.64554 **LONGITUDE:** -79.81348

DOWNSTREAM LIMIT:

DESCRIPTION: Upstream of Catawba Cr. mouth on the James R.

RIVER MILE: 326.14

LATITUDE: 37.60623 **LONGITUDE:** -79.78490

The upper limit is the confluence of Craig Creek (Eagle Rock Quad) on the James River near Gala, Virginia. The lower limit of the segment is just above the mouth of Catawba Creek on the James River (Salisbury Quad) just west of Rt. 726 in Botetourt County.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Total Phosphorus (1998)

This segment of the James River remains 303(d) listed due to insufficient data for de-listing the General Standard (benthic) impairment of the original 1998 303(d) segment. The 1998 List reports the segment impaired for the aquatic life use due to contravention of the General Standard where moderate impairment is reported at 2-JMS326.30. The impairment cause in 1998 was believed due to organic deposition as a result of upstream elevated total phosphorus concentrations.

The 2002 Assessment reported improved conditions in the segment at the same site. Benthic RBPII surveys demonstrate improved conditions from spring 1999- slightly (SI) and fall 2000- no impairment (NI). Additional data are required in order to assess the segment as fully supporting the General Standard.

These waters are also a 'Water of Concern' due to screening value exceedances of total phosphorus and sediment nickel.

Total Phosphorus: Two total phosphorus values exceed the screening value (SV) threshold of 0.20 mg/l from 16 samples at 2-JKS326.30 (at Salisbury). The two exceeding values are 0.26 mg/l in August 2000 and February 2001 resulting in an 'Observed Effect'.

Upstream total phosphorus concentrations are believed to contribute to the excursions where exceedances are found at station 2-JKS000.38 (I09R). The 2004 Assessment finds 25 of 58 total phosphorus samples exceed the SV at 2-JKS000.38. Station 2-JKS000.38 maximum remain at 0.70 mg/l as in 2002 where the 2000 maximum was 2.10 mg/l. The apparent reductions in magnitude lend evidence of improving conditions and the positive response found in the RBP II surveys.

The waters are a 'Water of Concern' based on exceedances of the Consensus Based Probable Effects Concentration (PEC) [MacDonald et al., 2000] screening values (SV) for nickel (Ni, SV= 48.6 parts per million). 1999 and 2000 sediment collections report values of 54.2 and 63.3 ppm respectively at station 2-JMS326.30.

Fact Sheets for Category 5 Waters

IMPAIRMENT SOURCE: PS / Ind. & Mun. / NPS-Urban

The source of the total phosphorus exceedance is believed to be from upstream point source discharges and nonpoint source runoff.

The source of the metals are unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Botetourt

STREAM NAME: Catawba Creek

HYDROLOGIC UNIT: 02080201

TMDL ID: VAW-I25R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 24.27 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Little Catawba Cr. mouth on Catawba Cr.

RIVER MILE: 24.27

LATITUDE: 37.45620 **LONGITUDE:** -80.00956

DOWNSTREAM LIMIT:

DESCRIPTION: Catawba Cr. mouth on the James R.

RIVER MILE: 0.00

LATITUDE: 37.60623 **LONGITUDE:** -79.78490

The segment begins at the mouth of Little Catawba Creek on Catawba Creek and extends downstream to the Catawba Creek confluence on the James River. The original 2002 impaired segment has been extended with the 2004 assessment.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

The 2004 segment extension is the result of the data described below.

The original 2002 listed segment began just downstream of the Roanoke Cement Co. water intake on Catawba Creek, river mile 23.16 (37°28'12"/80°00'18"). The 2002 segment ended just above the Town Branch mouth on Catawba Creek at river mile 11.84 (37°31'01"/79°52'45"). Additional data cause the extension of the 2002 segment.

Recreational Use
Three Catawba Creek stations find nonsupporting fecal coliform bacteria results. Fecal coliform bacteria at 2-CAT000.34 (Bridge near Salisbury Furnace) find two of nine observations exceed the WQS 400 cfu/100 ml instantaneous criterion. Values exceeding WQS are >8000 and 1100 cfu/100 ml. Seven of 27 samples at 2-CAT014.63 (Rt. 606 Bridge, Botetourt Co.) exceed ranging from 500 to a maximum of 2000 cfu/100 ml. And station 2-CAT023.83 (Rt. 779 Bridge near Gage) reports three of nine observations in excess of the WQS instantaneous criterion. The maximum exceedance is 1900 cfu/100 ml and the remaining two at 500 each.

IMPAIRMENT SOURCE: NPS, Wildlife, Grazing

Recreational Use
Fecal coliform exceedances are believed due to nonpoint source runoff, some grazing and possible wildlife contributions. The exact contributors are not known.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Botetourt

STREAM NAME: Looney Creek Drainage

HYDROLOGIC UNIT: 02080201

TMDL ID: VAW-I26R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 12.37 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Looney Creek and portions of Mill Cr. and Ellis Run.

RIVER MILE: 12.37

LATITUDE: 37.49806 **LONGITUDE:** -79.72780

DOWNSTREAM LIMIT:

DESCRIPTION: Looney Cr. mouth on the James River.

RIVER MILE: 0.00

LATITUDE: 37.51806 **LONGITUDE:** -79.70235

The Looney Creek portion of the overall impaired segment begins at the confluence of Mill and Back Creek on Looney Creek northeast of Lithia, Virginia, on the Montvale Quad at river mile 2.48. The segment ends at the mouth of Looney Creek on the James River. This is the original 1998 Listed segment. Total impaired miles are 12.37 with the addition of Mill Creek and Ellis Run

Note: Bacteria collections on Mill Creek and Ellis Run cause the original listed segment to be expanded to include protions of the aforementioned creeks. The TMDL Study through the development of bacteria allocations will encompass these drainages.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
The Looney and Mill Creek Total Maximum Daily Load (TMDL) Bacteria Load Duration Analysis Study is underway with anticipated completion in 2004. Fecal coliform bacteria exceedances cause the original 1998 2.48 mile recreational use impairment in Looney Creek. Two of 18 samples exceed the fecal coliform bacteria instantaneous criterion of 400 cfu/100 ml. The segment brackets station 2-LMC000.40 (Rt. 625 Bridge).

The following stream segments are 2004 additions to the original 1998 303(d) Listing.

Mill Creek - 2004 Addition. Impaired Miles: 8.29
Start: Downstream of the Rt. 11 crossing. (RM 8.29)
Lat: 37.454769 Long: -79.827152
End: Mill Creek confluence with Back Creek. (RM 0.00)
Lat: 37.498180 Long: -79.727830

Station 2-MIA000.79 located at the junction of Rts. 11 and 772 finds fecal coliform bacteria exceeds the WQS 400 cfu/100 ml instantaneous criterion in four of six observations. The exceeding values range from 460 cfu/100 ml to 1600. Two of six Escherichia coli (E. coli) samples exceed the WQS 235 cfu/100 ml instantaneous criterion at 470 and 700 cfu/100 ml.

Ellis Run - 2004 Addition. Impaired Miles: 1.60

Fact Sheets for Category 5 Waters

Start: Rt. 645 crossing. (RM 1.60)
Lat: 37.467844 Long: -79.734450
End: Ellis Run confluence on Back Creek. (RM 0.00)
Lat: 37.492480 Long: -79.736602

The station located on the Rt. 643 Bridge, 2-ELS000.08 also finds fecal coliform bacteria exceeding in five of six samples. Values exceeding the WQS 400 cfu/100 ml instantaneous criterion range from 700 to 9200 cfu/100 ml. Five of six E. coli samples also exceed the WQS instantaneous criterion of 235 cfu/100 ml ranging from 350 to >800 cfu/100 ml. However E. coli can not be assessed for impairment as per [9 VAC 25-260-170.A.1. Bacteria; other waters] because there are not 12 samples. This results in an 'Observed Effect' for the E. coli in the segment. One temperature exceedance of the Stockable Trout water criterion (21°C) is found in five measurements at 22°C on 6/12/2002 also reported as an 'Observed Effect'.

IMPAIRMENT SOURCE: NPS - Agriculture/Urban

Recreational Use
The sources are believed to be primarily agricultural nonpoint source pollution. Urban (residential) nonpoint source pollution potential exists.